Protein of interest			
Functional category	Percentage of the total preparation	Mean copy number per synapse ± SEM	Concentration in the synapse [µM]

Synaptosomes obtained from rat cortex and cerebellum were immunolabeled for the protein of interest (red, STED), the active zone marker bassoon (blue, confocal) and the vesicle marker synaptophysin (green, confocal). The density distribution in the last image illustrates the distribution of the protein of interest (heat map, blue indicating low and red high abundance) in relation to the bassoon signal (black circle). Scale bars are 500 nm (representative images) and 200 nm (heat map).

Neuronal cultures from the rat hippocampus (CA1 - CA3) were immunolabeled after 15 - 20 DIV for the protein of interest (red, STED), the active zone marker bassoon (blue, confocal) and the vesicle marker synaptophysin (green, confocal). The density distribution in the last image illustrates the distribution of the protein of interest (heat map, blue indicating low and red high abundance) in relation to the bassoon signal (black circle). Scale bars are 2 µm (representative images) and 200 nm (heat map).

Neuromuscular junctions (*levator auris longus muscle*) from mice were dissected and immunolabeled for the protein of interest (red, STED) and the vesicle marker synaptophysin (green, confocal). In addition, the active zone was marked using labeled bungarotoxin (blue, confocal). The density distribution in the last image illustrates the distribution of the protein of interest (heat map, blue indicating low and red high abundance) in relation to the bungarotoxin signal (white outline). Scale bars are 2 µm (representative images) and 500 nm (heat map).

Relation between the abundance of the protein of interest and synapse size. The intensity of synaptophysin in each bouton is presented on the x-axis (as a measure of the number of synaptic vesicles and thus of synapse size). The y-axis presents the intensity of the protein of interest in the same boutons. These data were obtained from hippocampal cultures. Data points represent mean ± SEM.

Distribution of the protein of interest in relation to the active zone. The x-axis indicates the distance to the center of the active zone, while the y-axis plots the average protein intensity, obtained from the protein maps from the hippocampal culture panels. Curves that fall rapidly with distance from the active zone are typical for proteins that are enriched in the active zone, while proteins widely distributed in the synaptic volume show flatter, less steep curves.

List of primary antibodies used to detect the protein of interest in the different assays.

List of references used to determine the appropriate organization and structure of the protein of interest in the average presynaptic terminal. In cases where information on protein structure was available from the protein data base (PDB) the respective identifier/s is/are also listed.

Molecular structure of the protein of interest as used in the model synapse.

Model of the average presynaptic terminal indicating the spatial organization of the protein of interest, as derived from the data presented on the previous page.

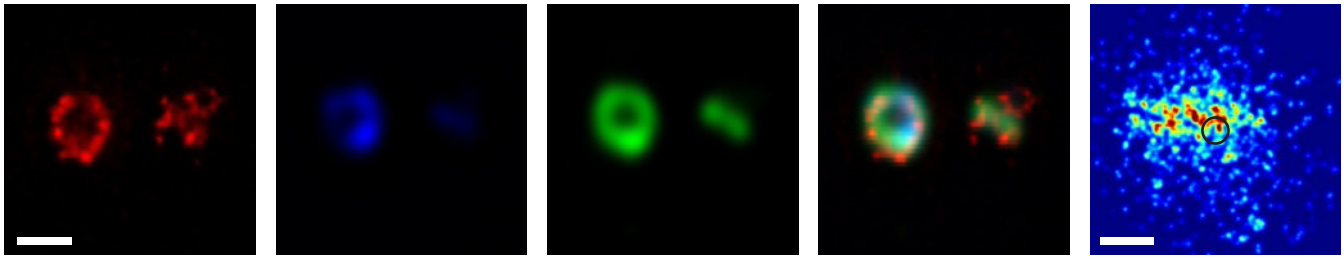
High magnification of a synaptic vesicle within the model, showing only the protein of interest.

High magnification of the active zone area of the model, showing only the protein of interest.

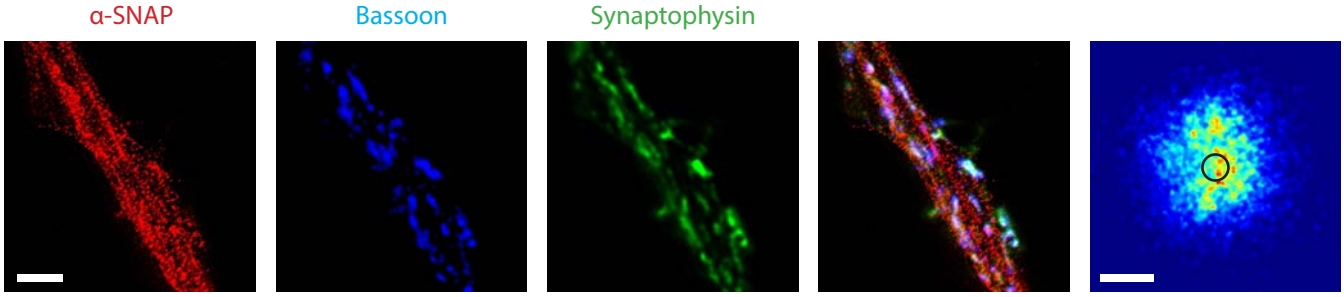
α-SNAP

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE co-factor	0.063	1150.70 ± 46.62	7.68

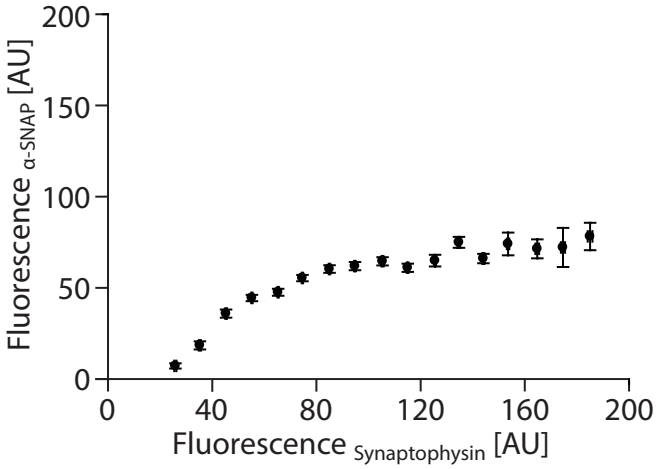
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

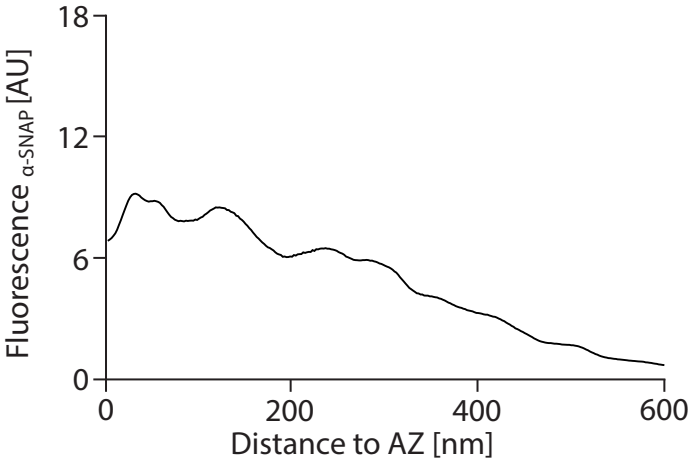


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for α-SNAP):

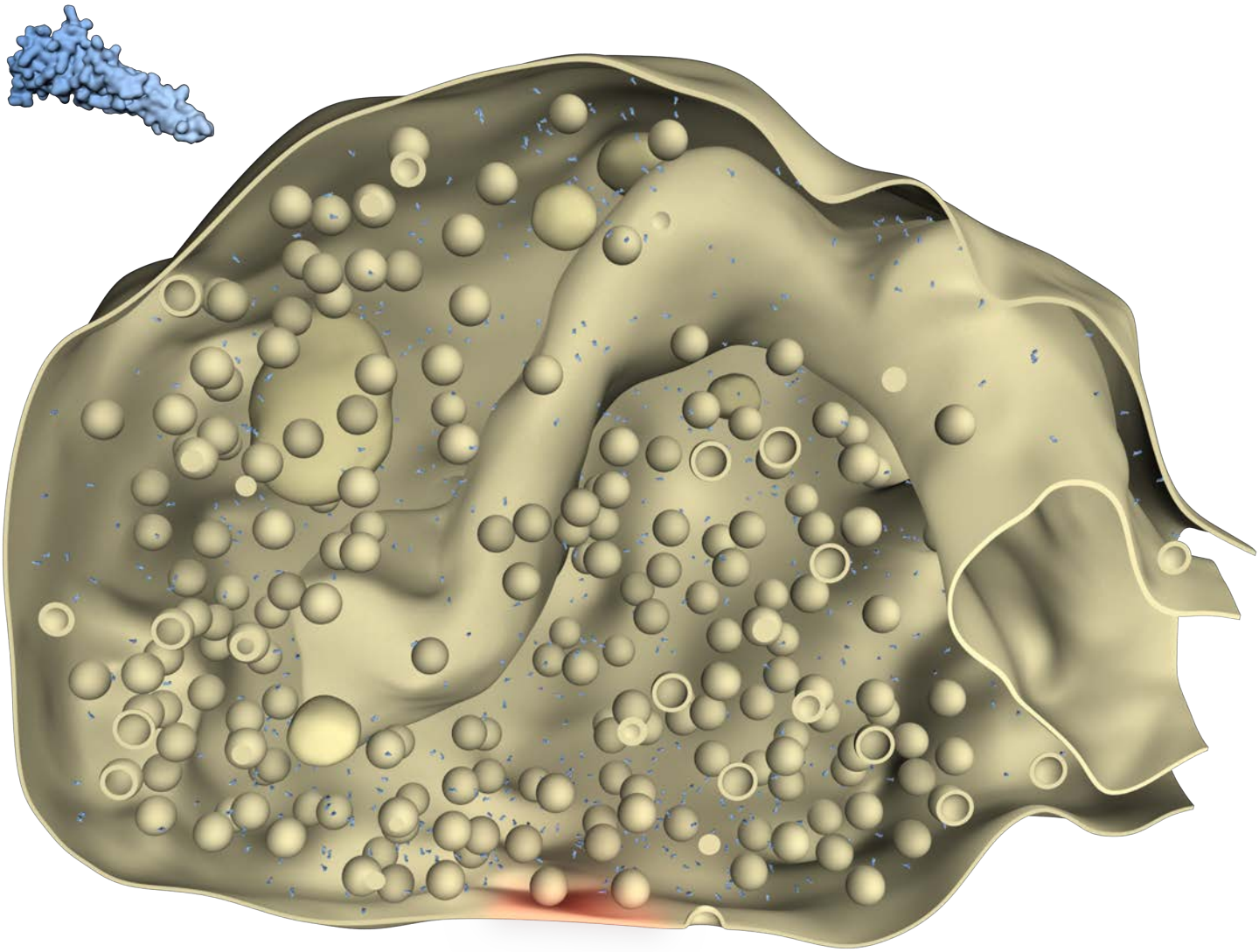
Immunoblots - Synaptic Systems (Göttingen, Germany), 112 111
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 112 111
HC stainings - Synaptic Systems (Göttingen, Germany), 112 111
NMJ stainings - Synaptic Systems (Göttingen, Germany), 112 111
Slice/Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 112 111

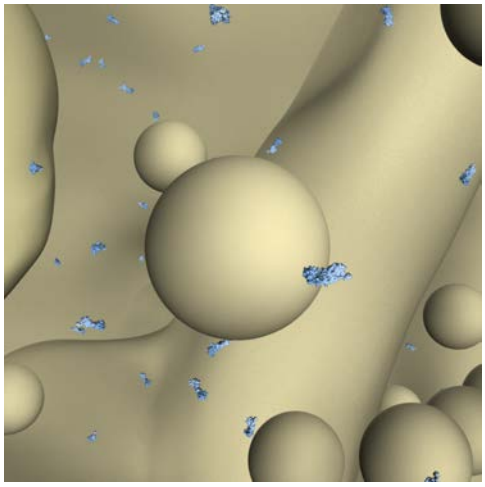
References:

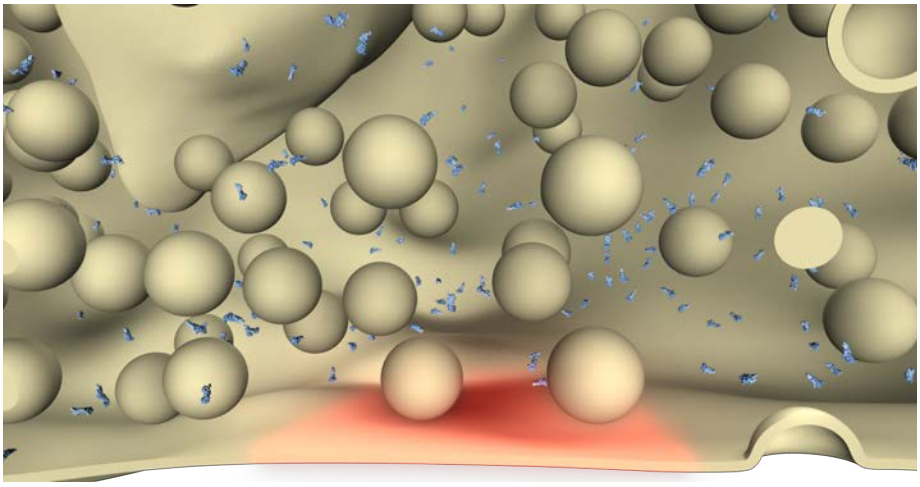
PDB-Identifier (structural information): 1qqe.
Söllner, T. (1993b). Nature 362, 318-24.
Jahn, R., and Scheller, R.H. (2006). Nat Rev Mol Cell Biol 7, 631-43.

α-SNAP

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE co-factor	0.063	1150.70 ± 46.62	7.68





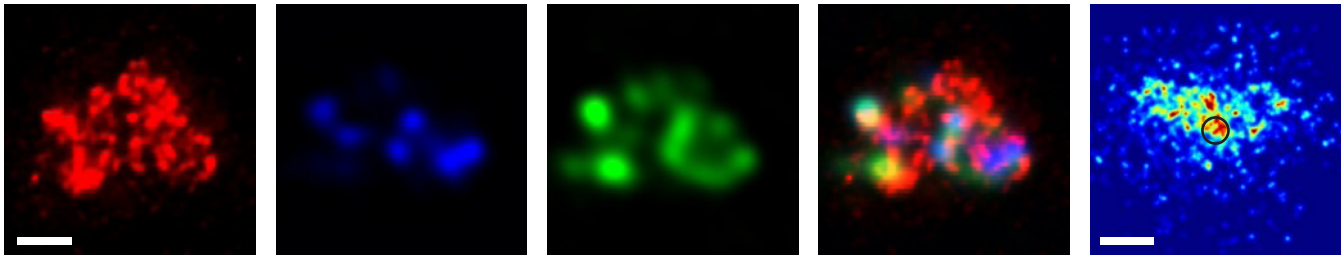


α/β-Synuclein

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Disease-related	0.156	6525.67 ± 345.48	43.57

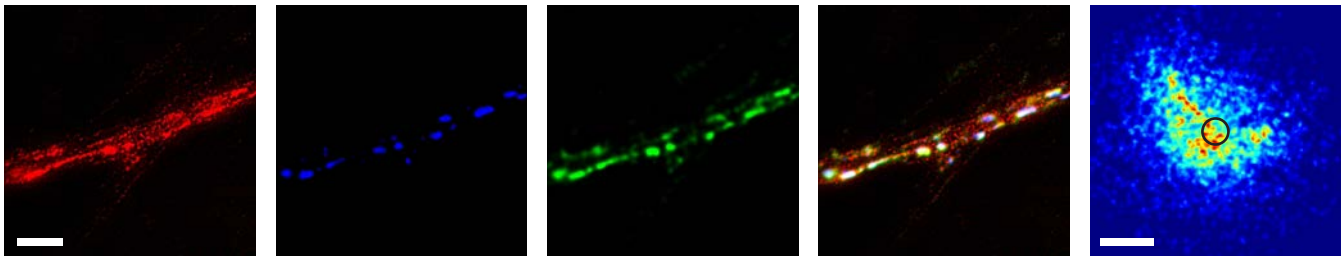
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

α/β-Synuclein Bassoon Synaptophysin



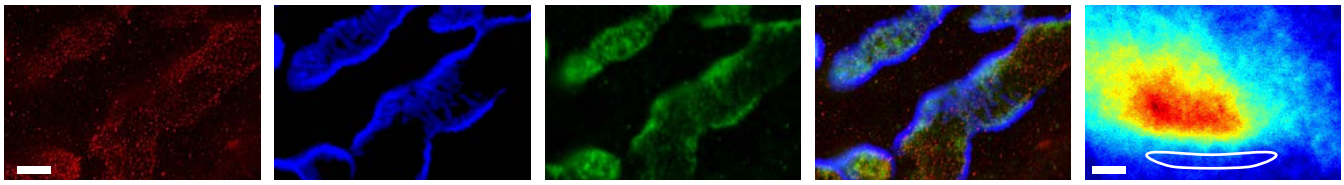
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

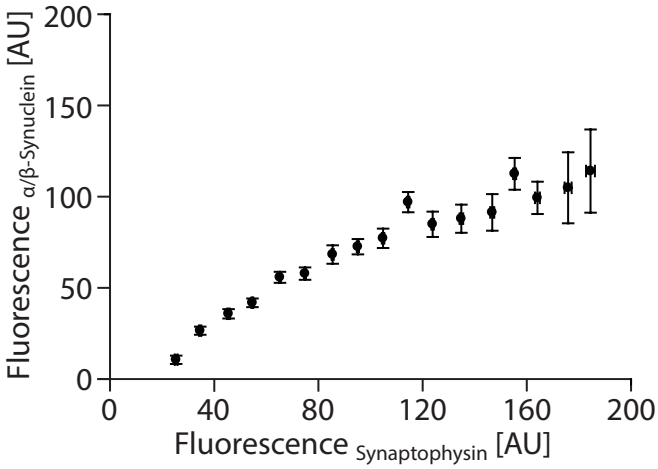
α/β-Synuclein Bassoon Synaptophysin

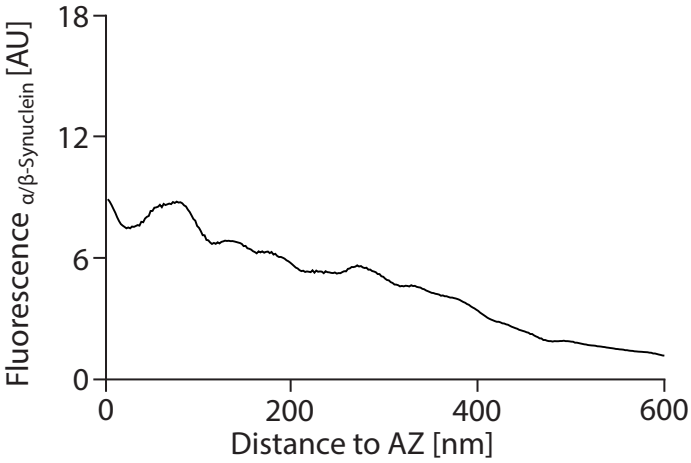


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

α/β-Synuclein Bungarotoxin Synaptophysin







Antibodies used (for α/β-Synuclein):

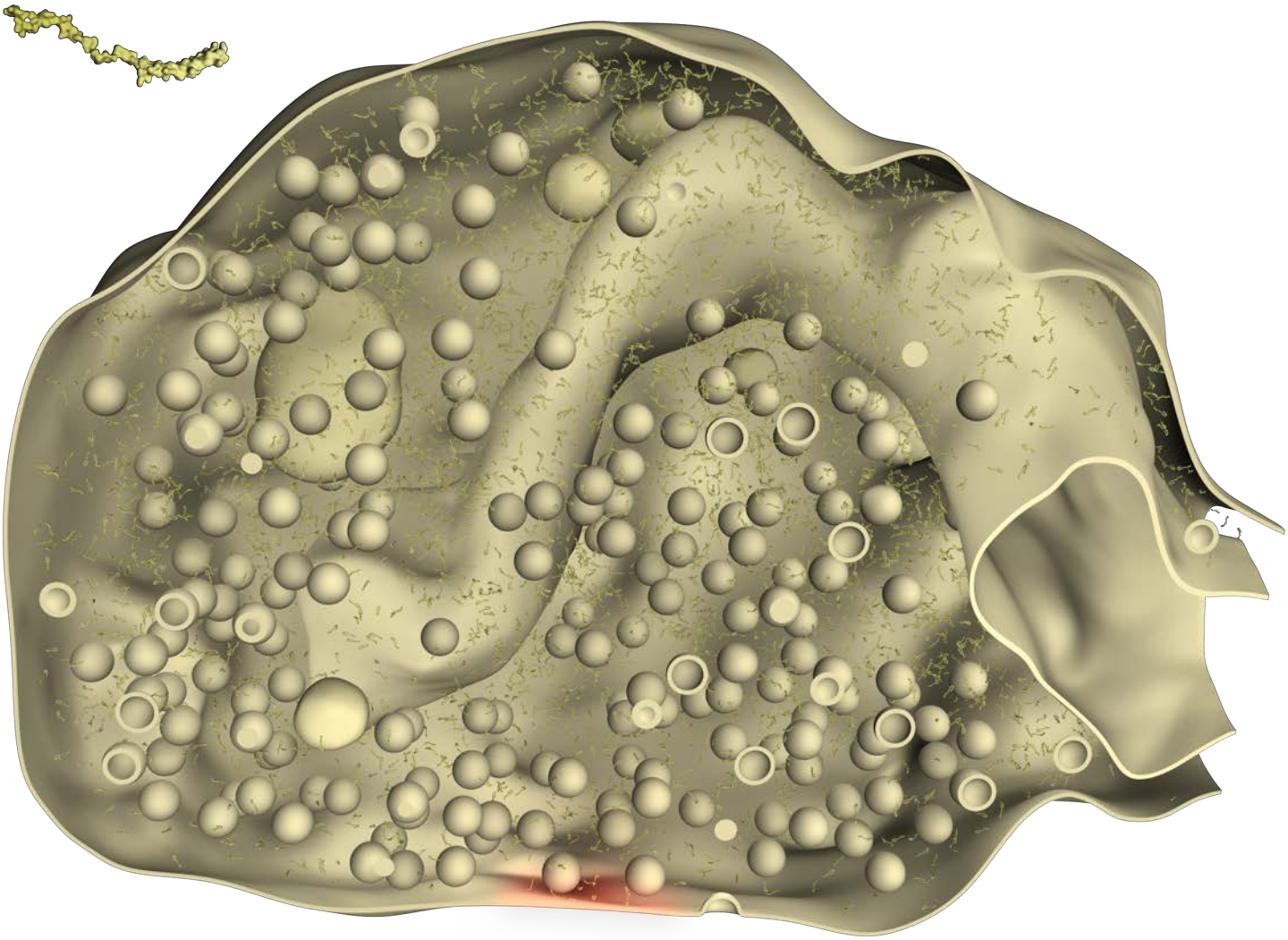
Immunoblots - Synaptic Systems (Göttingen, Germany), 128 002
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 128 002
HC stainings - Synaptic Systems (Göttingen, Germany), 128 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 128 002

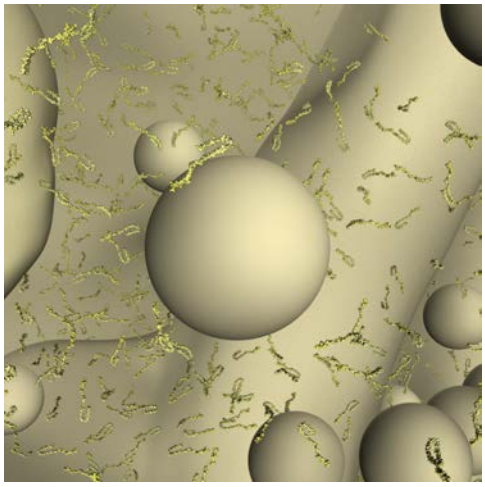
References:

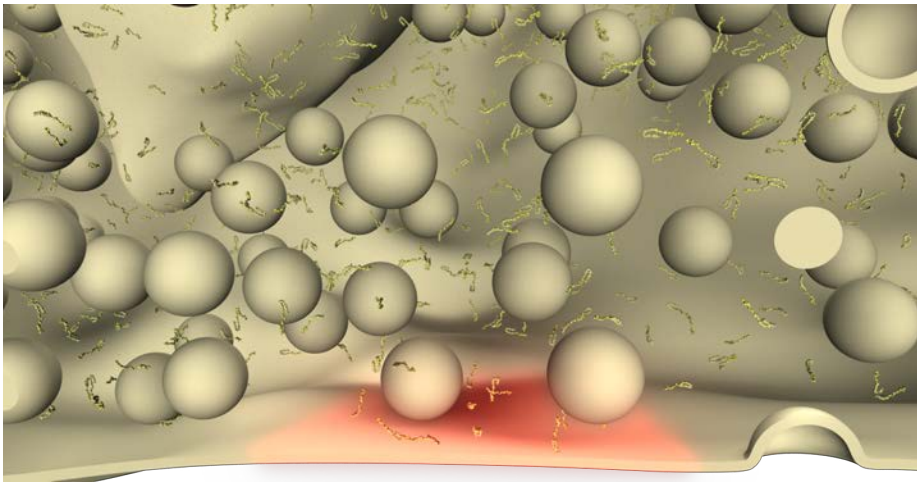
PDB-Identifier (structural information): 1xq8.
Scott, D., and Roy, S. (2012). J Neurosci 32, 10129-35.
Marques, O., and Outeiro, T.F. (2012). Cell Death Dis 2, 140-51.

α/β-Synuclein

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Disease-related	0.156	6525.67 ± 345.48	43.57



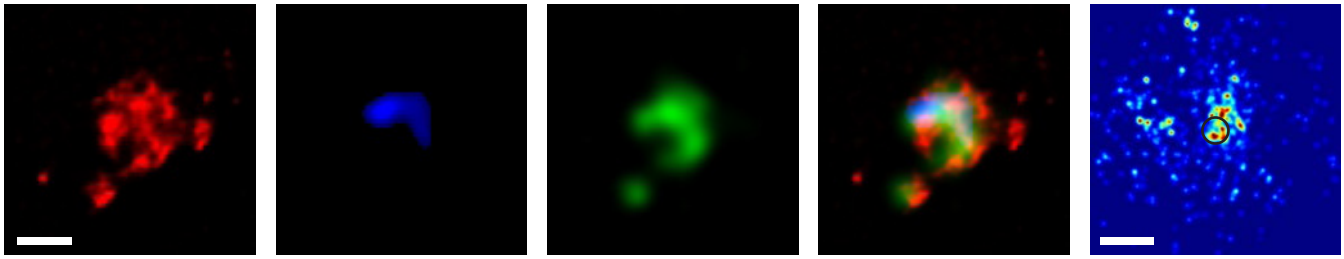




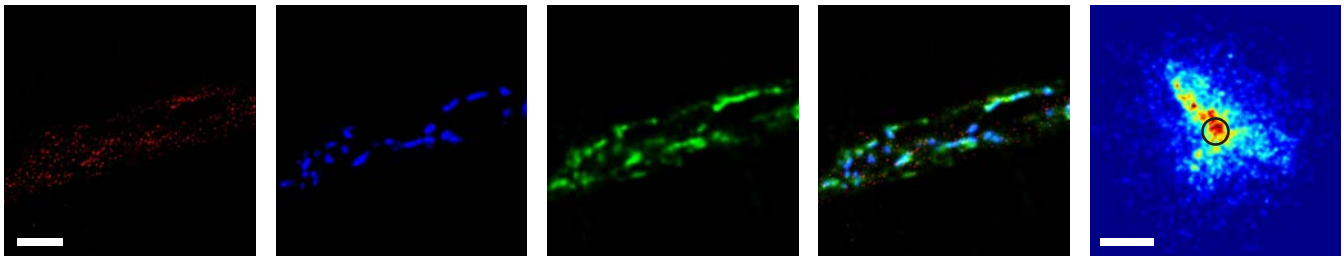
β-secretase

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Disease-related	0.011	115.84 ± 2.75	0.77

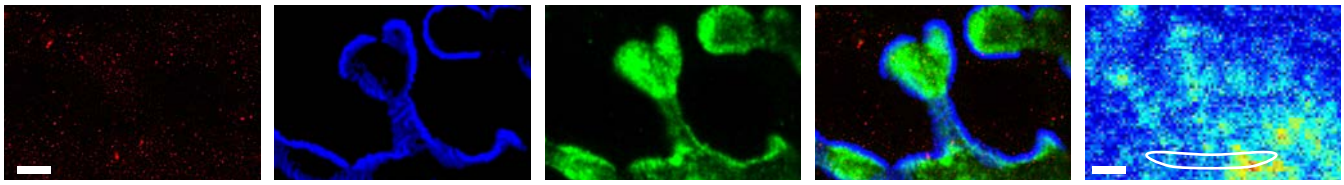
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

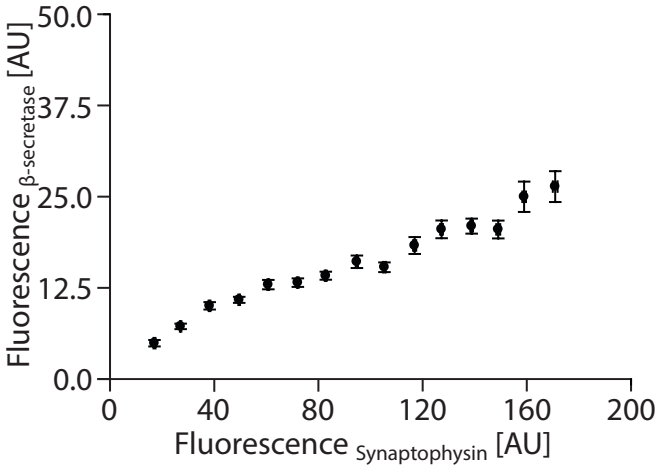


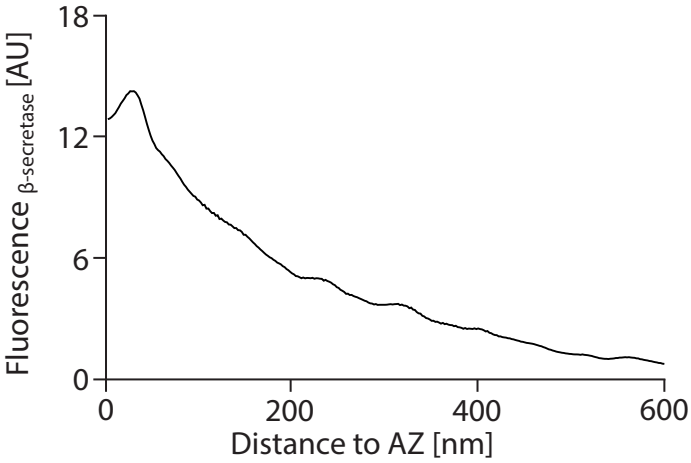
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for β-secretase):

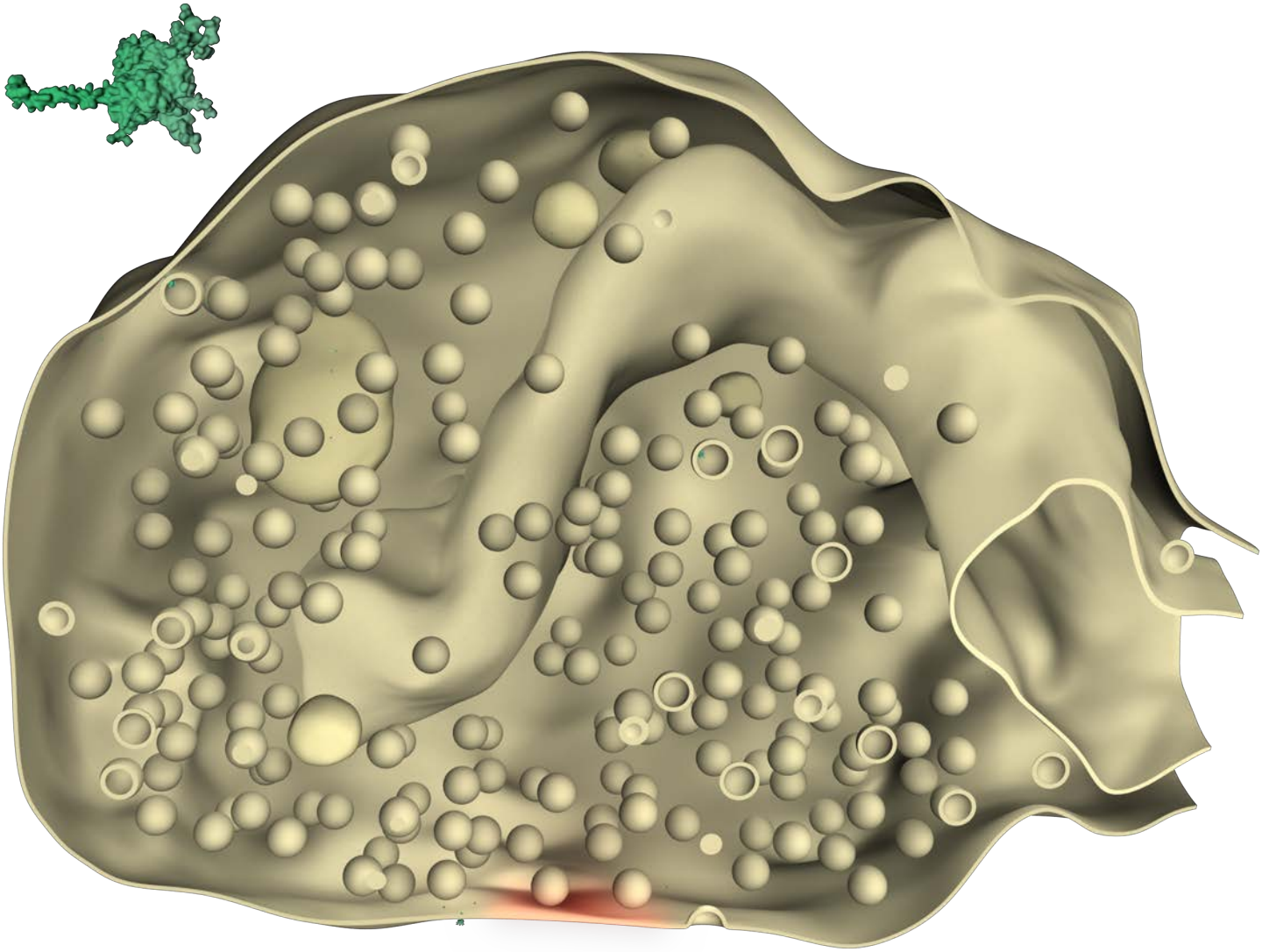
Immunoblots - Santa Cruz (Heidelberg, Germany), sc-10748
Synaptosome stainings - Santa Cruz (Heidelberg, Germany), sc-10748
HC stainings - Santa Cruz (Heidelberg, Germany), sc-10748
NMJ stainings - Santa Cruz (Heidelberg, Germany), sc-10748

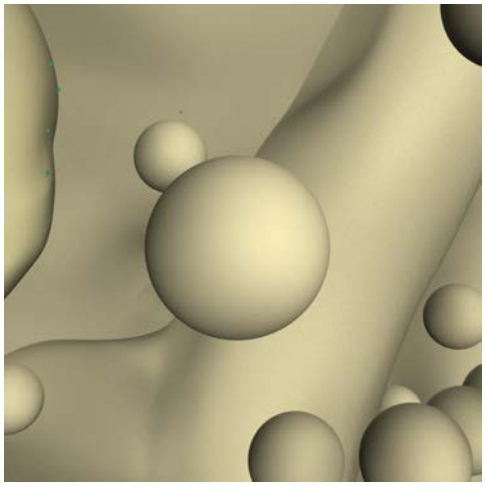
References:

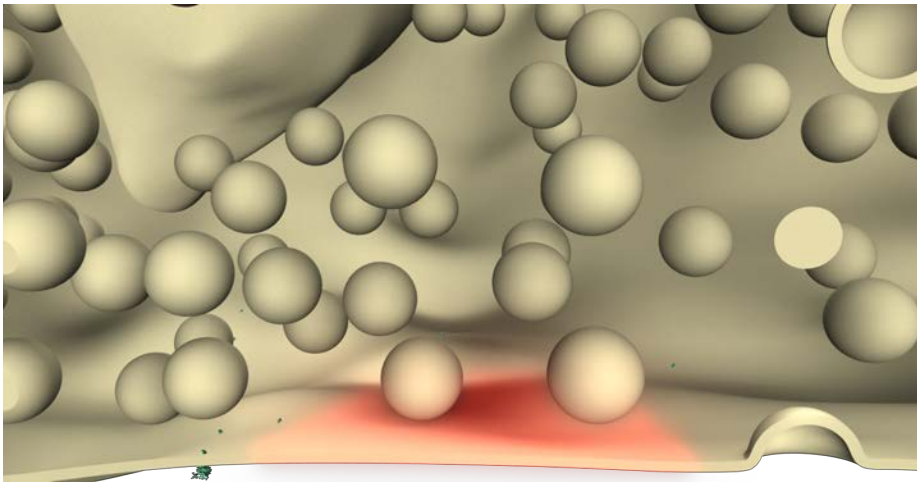
PDB-Identifier (structural information): 1sgz.
Goldsbury, C., et al. (2006). Traffic 7, 873-88.
Groemer, T.W., et al. (2011). PLoS One 6, e18754

β-secretase

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Disease-related	0.011	115.84 ± 2.75	0.77



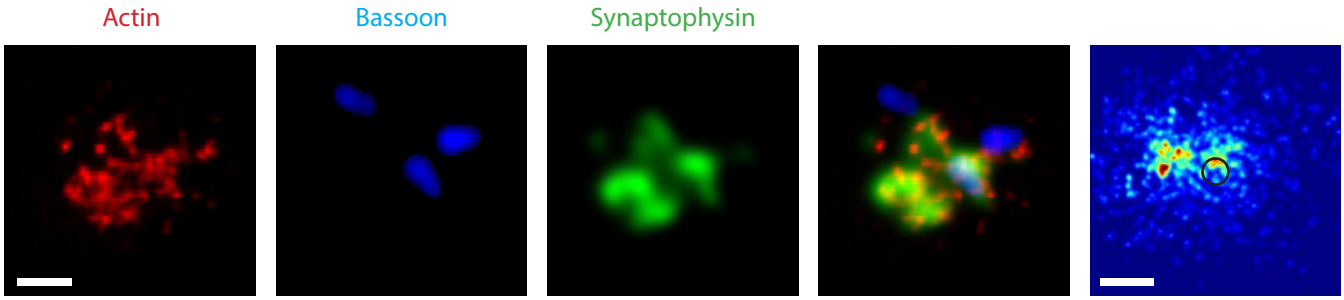




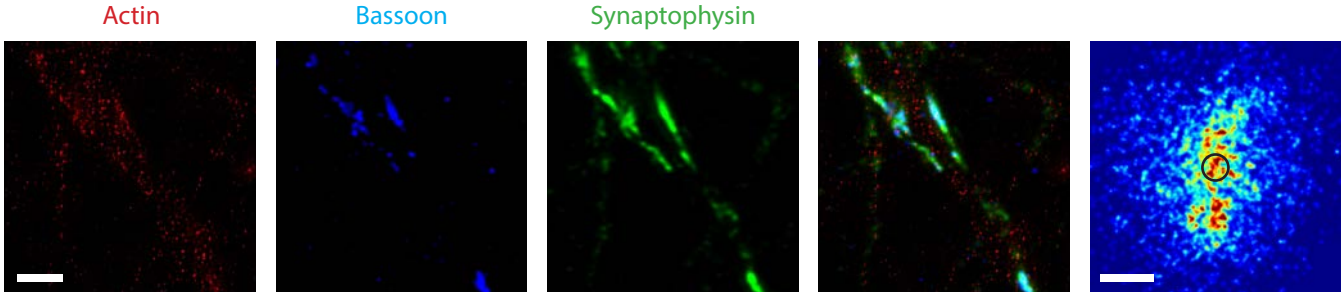
Actin

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Cytoskeleton	2.141	22074.60 ± 1909.62	147.39

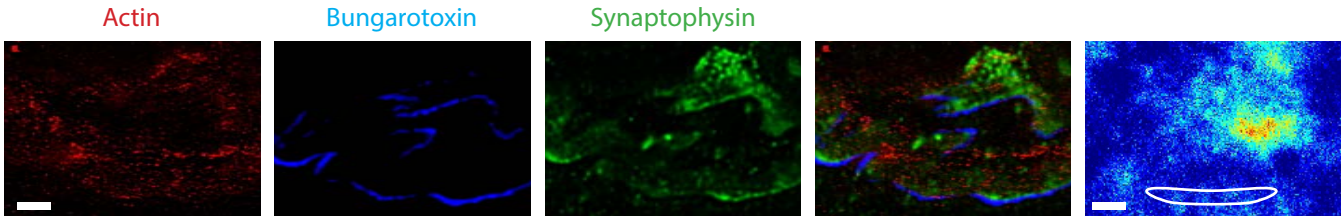
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

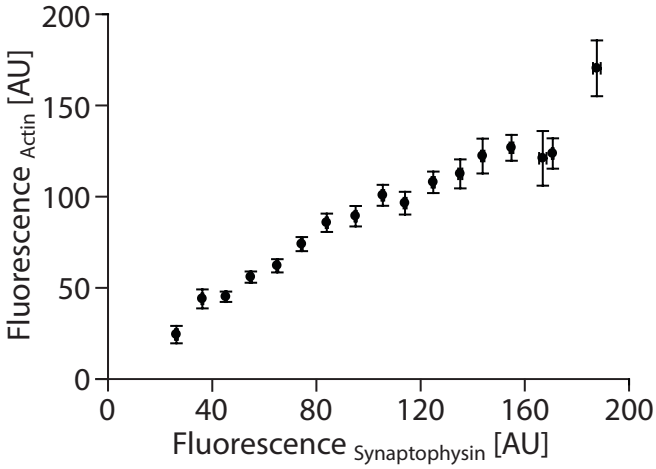


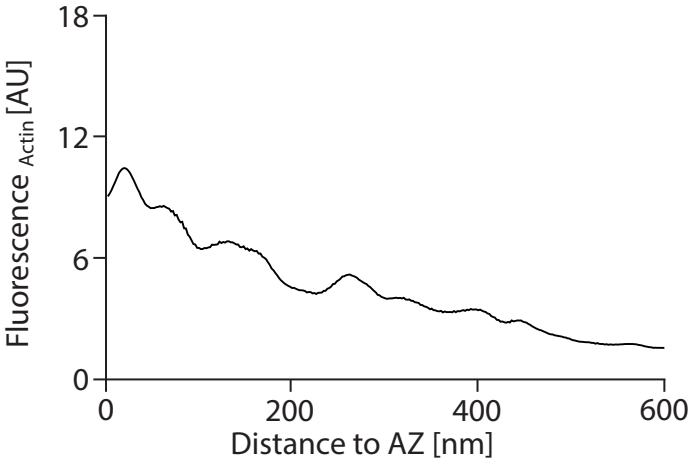
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Actin):

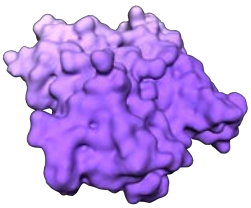
Immunoblots - Novus Biologicals (Littleton, Colorado, USA), NB600-535
Synaptosome stainings - Novus Biologicals (Littleton, Colorado, USA), NB600-535
HC stainings - Sigma (Taufkirchen, Germany), A1978
NMJ stainings - Sigma (Taufkirchen, Germany), A1978

References:

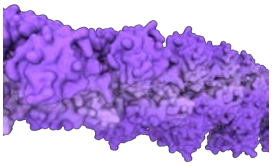
PDB-Identifier (structural information): 3g37.
Sankaranarayanan, S., et al. (2003). Nat Neurosci 6, 127-35.

Actin

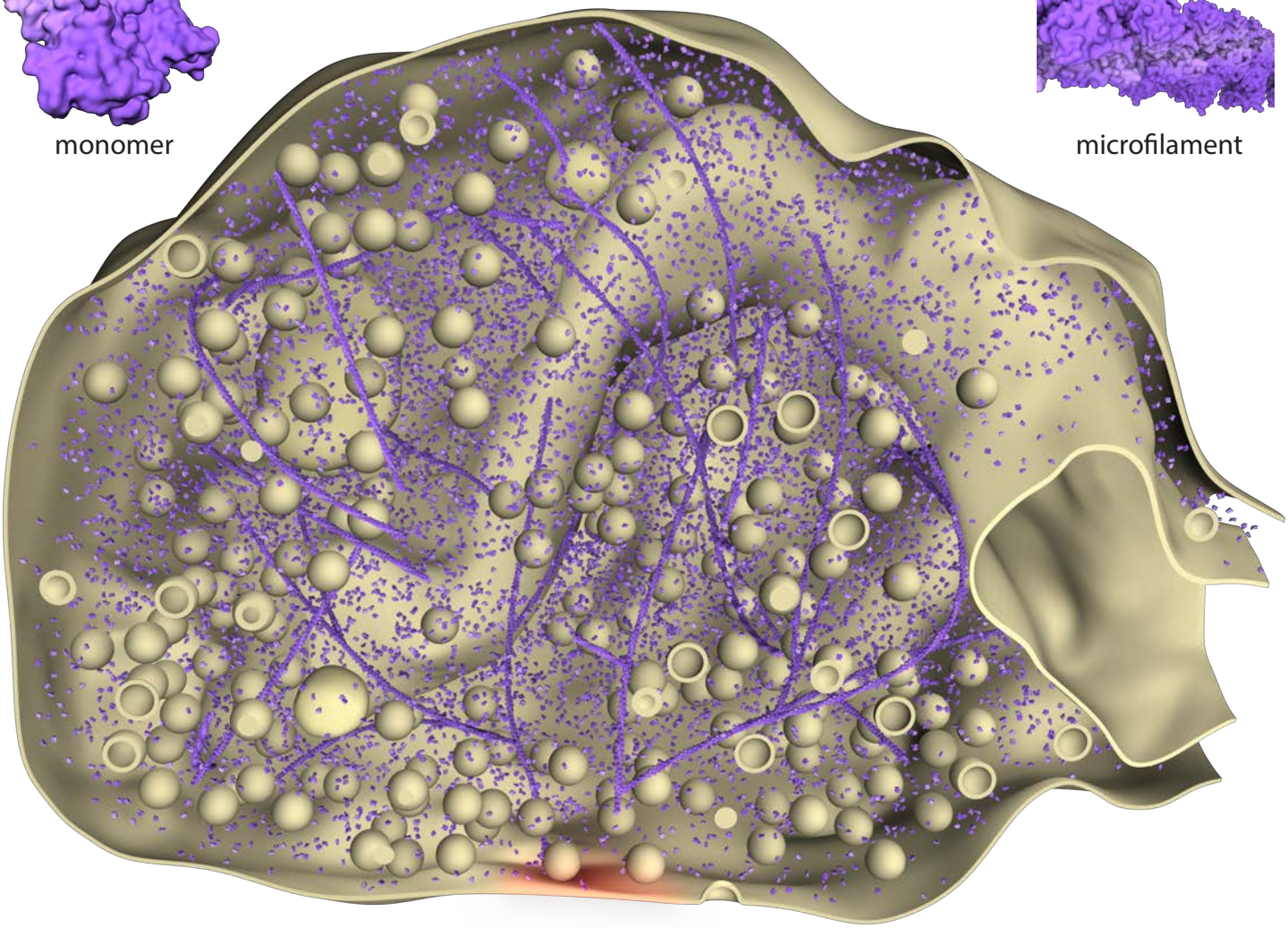
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Cytoskeleton	2.141	22074 ± 1909.62	147.39

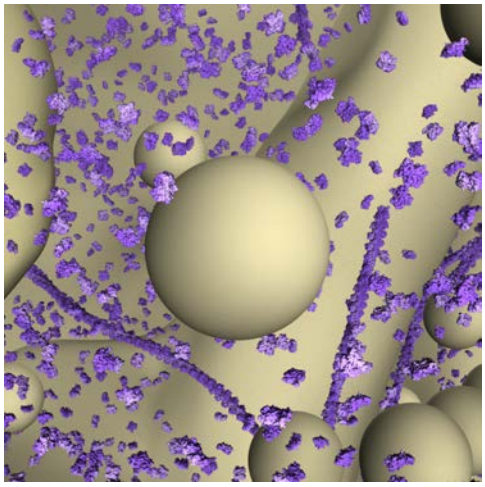


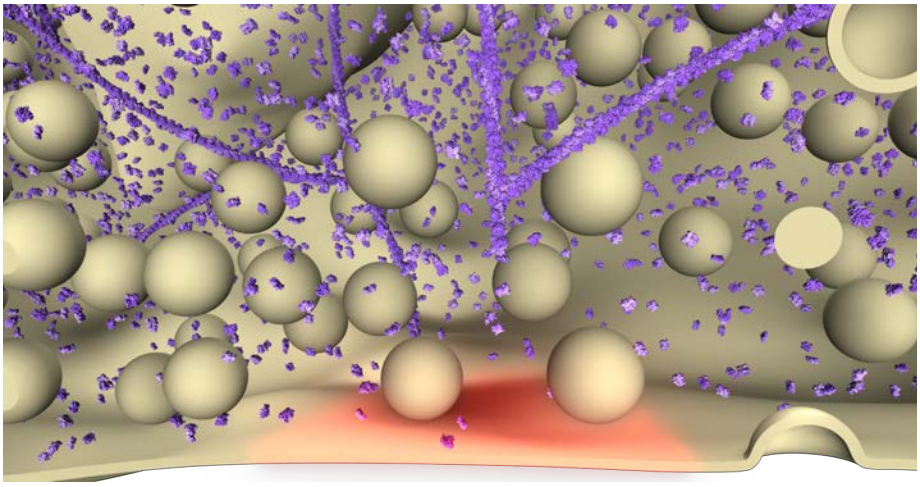
monomer



microfilament



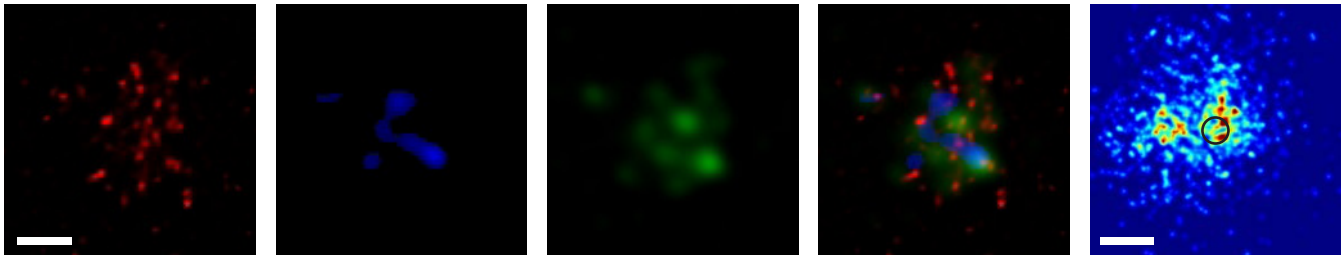




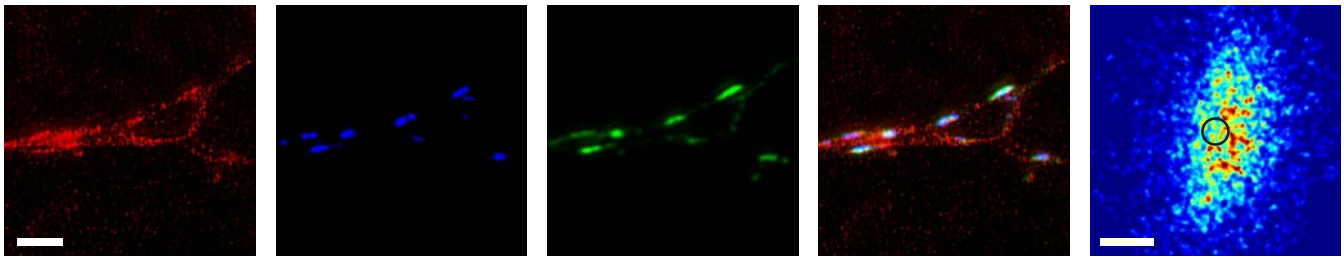
Amphiphysin

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.148	1194.20 ± 60.04	7.97

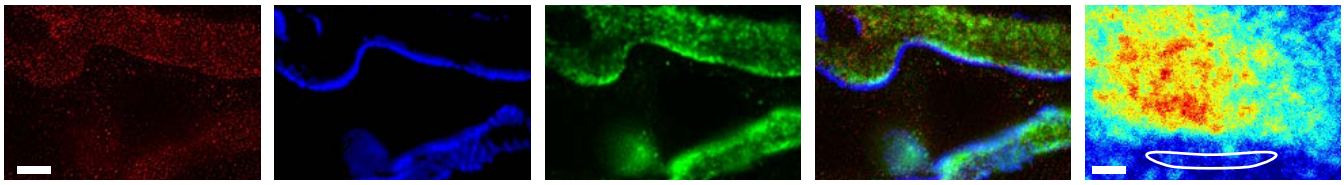
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

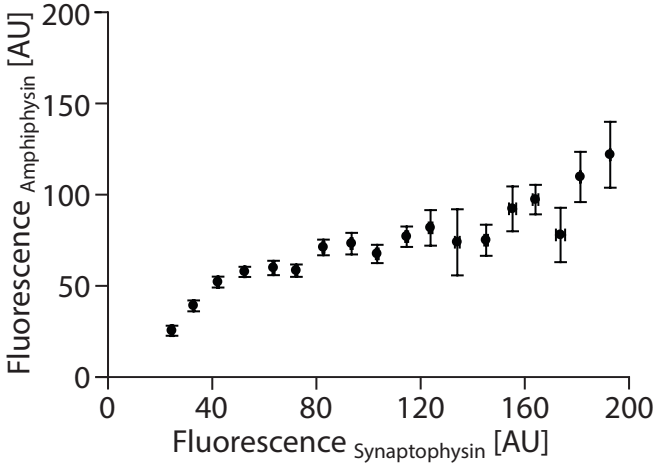


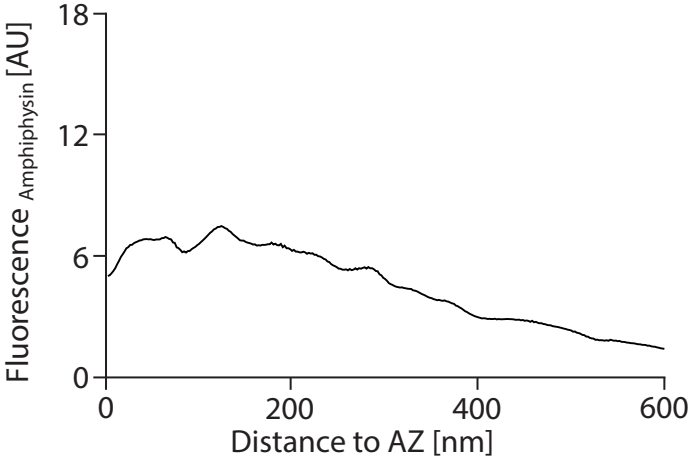
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Amphiphysin):

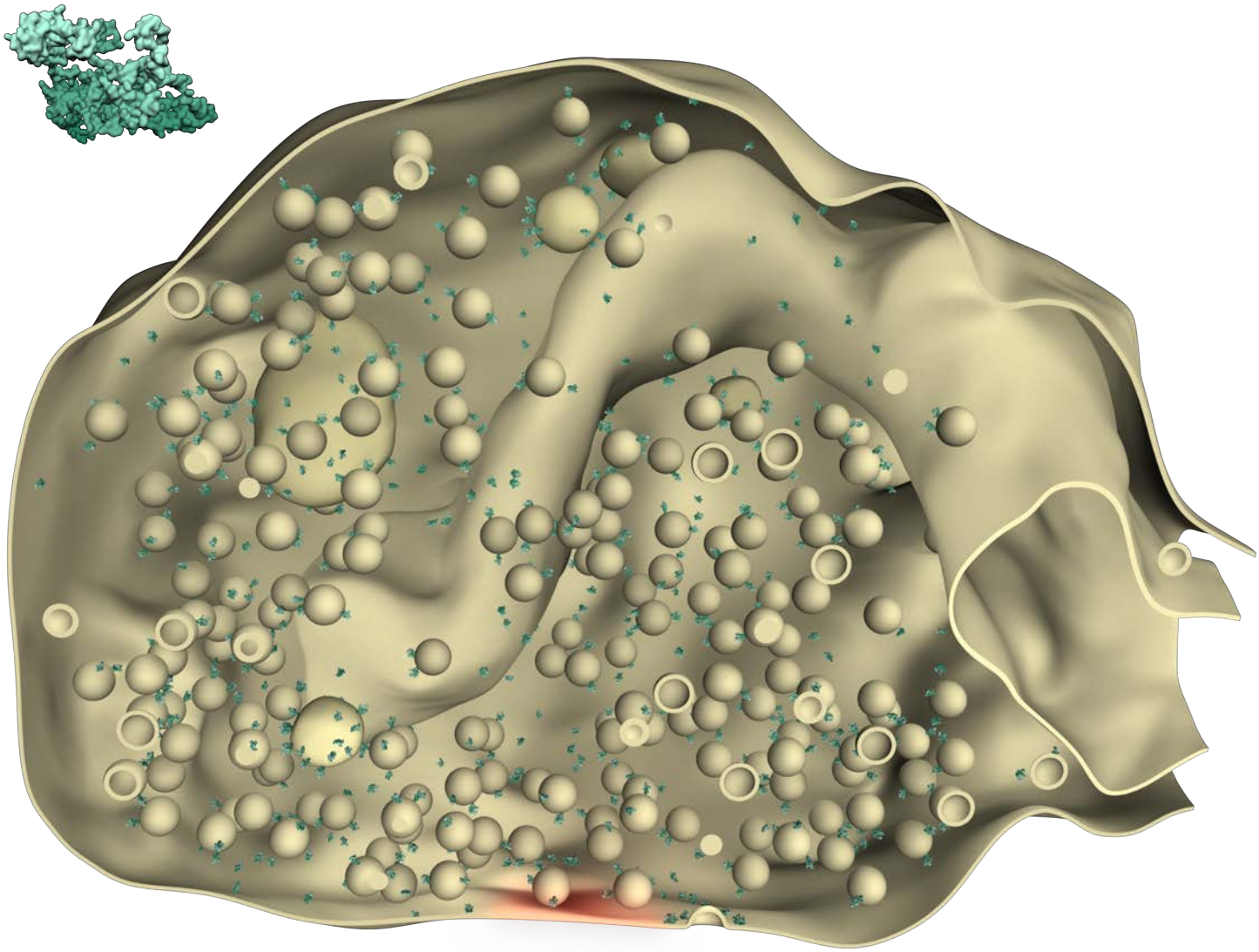
Immunoblots - Synaptic Systems (Göttingen, Germany), 120 002
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 120 002
HC stainings - Synaptic Systems (Göttingen, Germany), 120 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 120 002

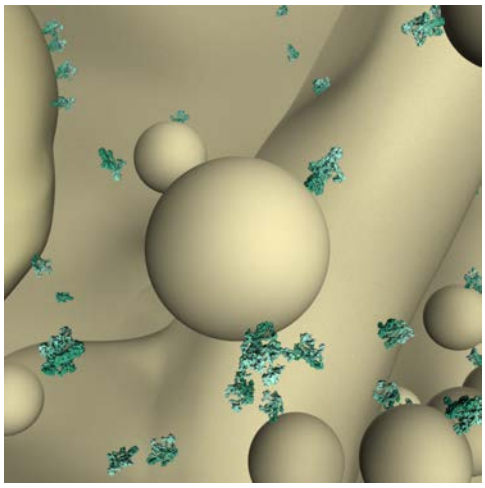
References:

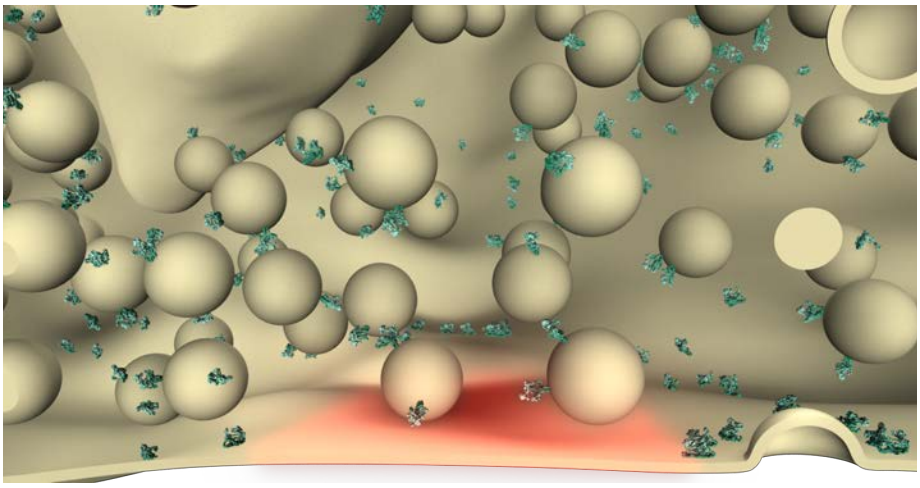
PDB-Identifier (structural information): 4atm.
Wigge, P., et al. (1997). Mol Biol Cell 8, 2003-15.
Shupliakov, O., et al. (1997). Science 276, 259-63.

Amphiphysin

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.148	1194.20 ± 60.04	7.97



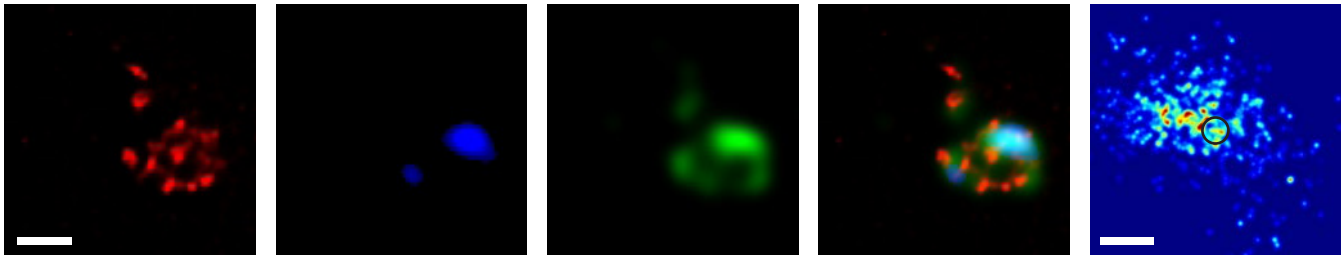




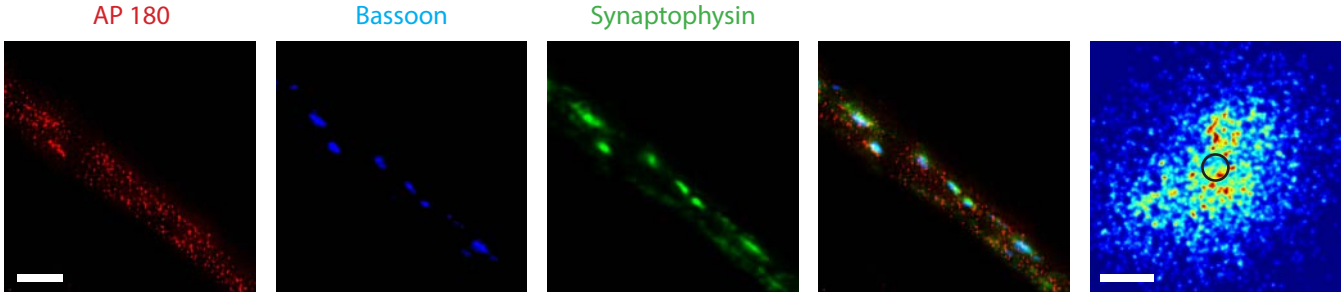
AP 180

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.576	3736.40 ± 207.63	24.95

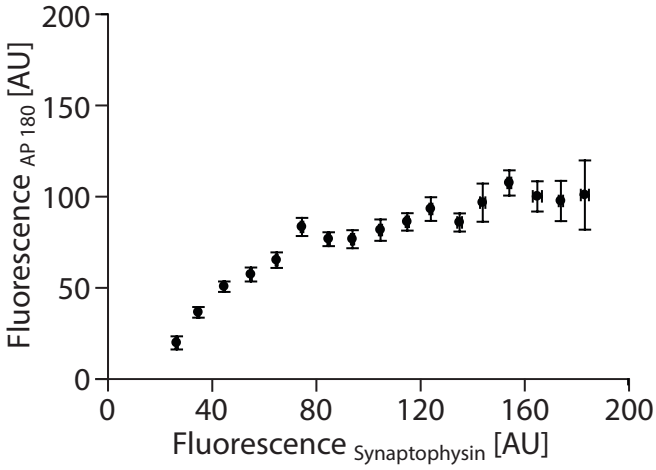
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

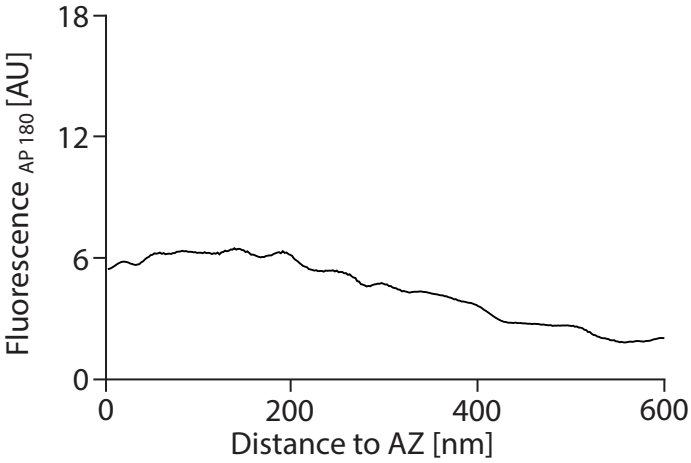


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for AP 180):

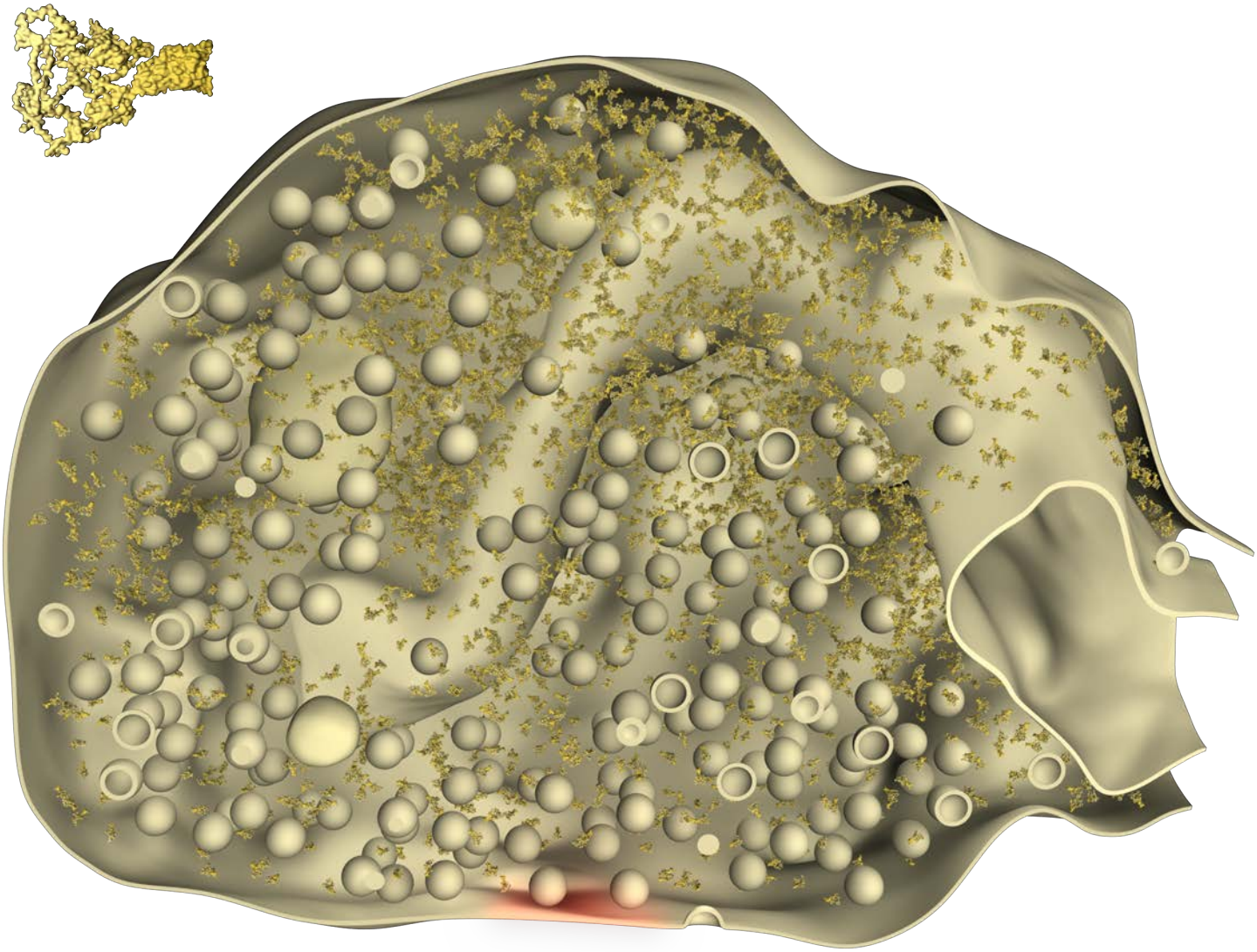
Immunoblots - Synaptic Systems (Göttingen, Germany), 155 003
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 155 003
HC stainings - Synaptic Systems (Göttingen, Germany), 155 003
NMJ stainings - Synaptic Systems (Göttingen, Germany), 155 003

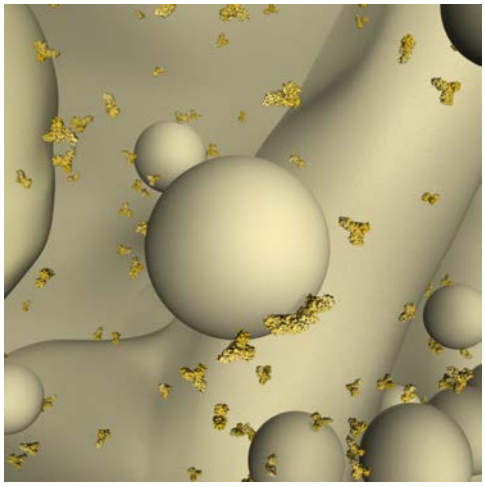
References:

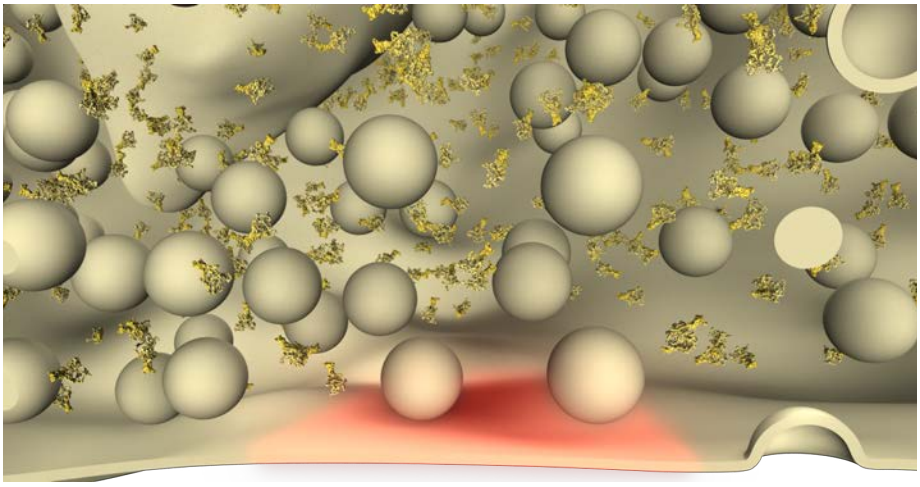
PDB-Identifier (structural information): 1hx8.
Morgan, J.R., et al. (2000). J Neurosci 20, 8667-76.
Nonet, M.L., et al. (1999). Mol Biol Cell 10, 2343-60.

AP 180

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.576	3736.40 ± 207.63	24.95





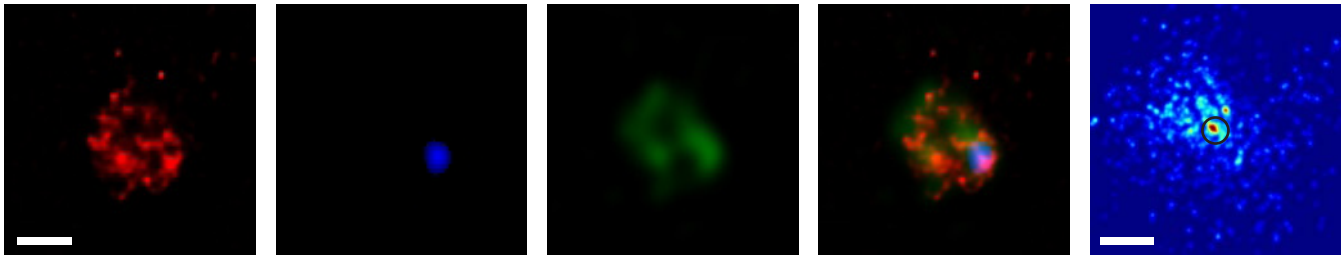


AP 2 (mu2)

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.190	2324.70 ± 81.99	15.52

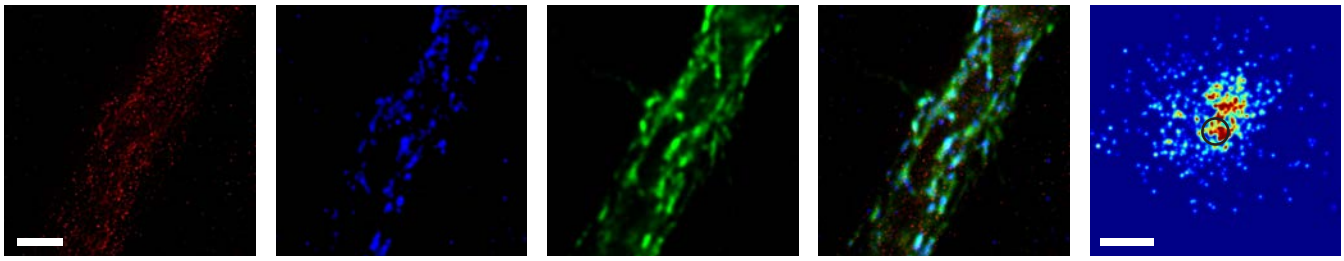
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

AP 2 Bassoon Synaptophysin



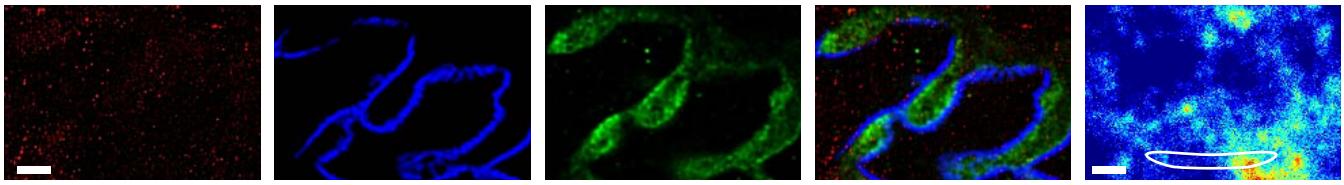
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

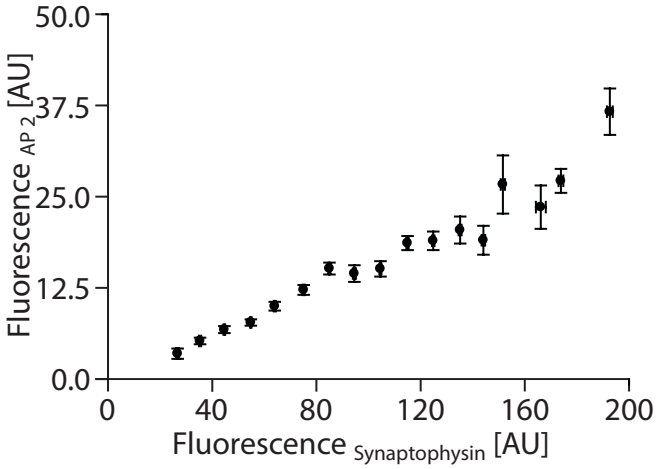
AP 2 Bassoon Synaptophysin

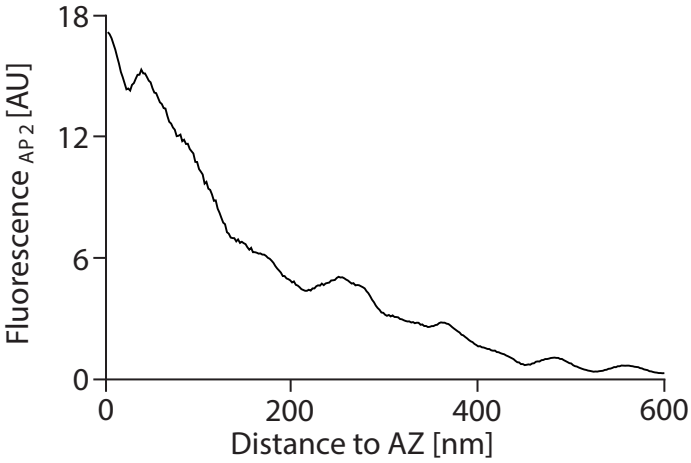


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

AP 2 Bungarotoxin Synaptophysin







Antibodies used (for AP 2):

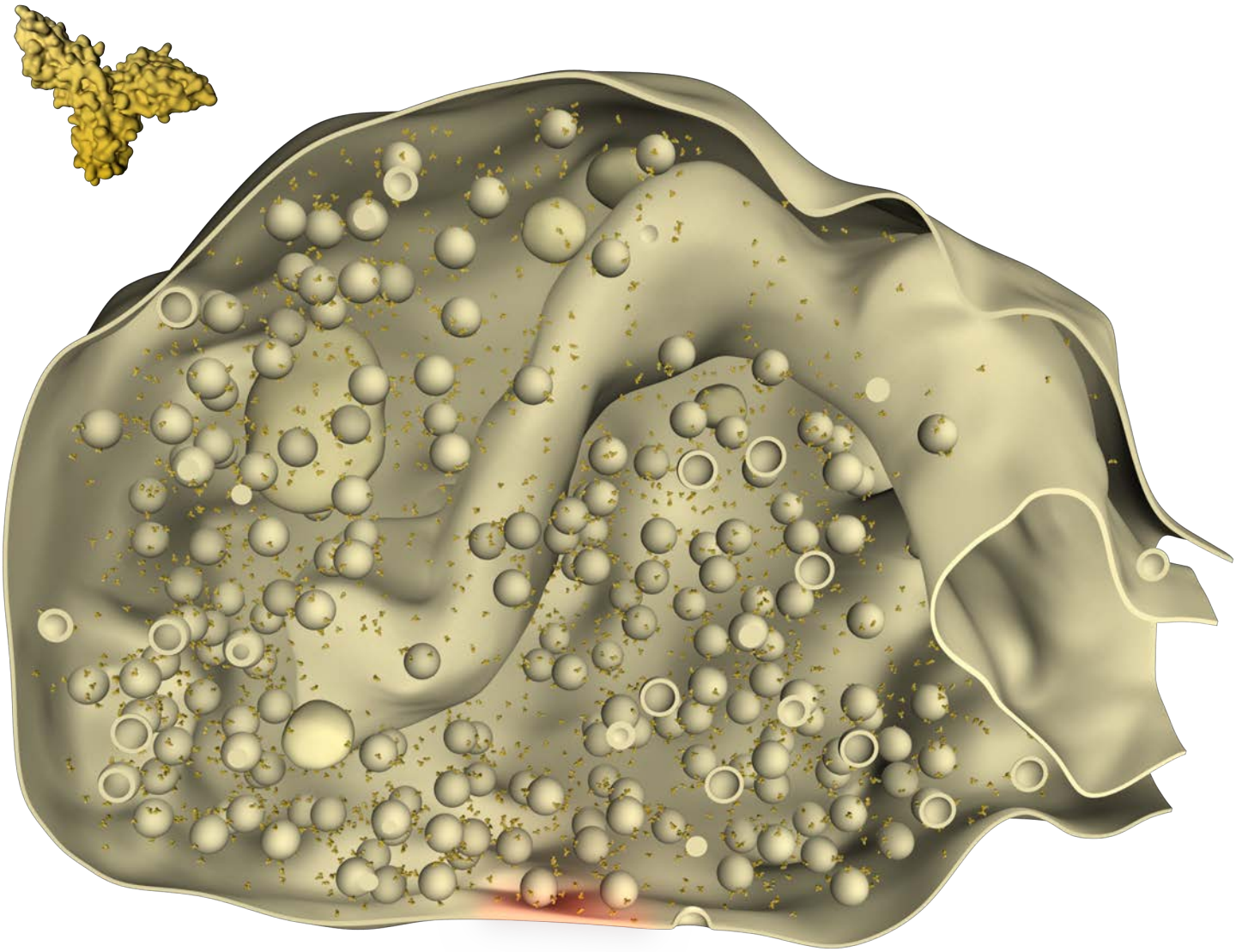
Immunoblots - Abcam (Cambridge, England), ab75995
Slice/synaptosome stainings - Abcam (Cambridge, England), ab75995
HC stainings - Santa Cruz (Heidelberg, Germany), sc-99026
NMJ stainings - Sigma (Taufkirchen, Germany), A5441

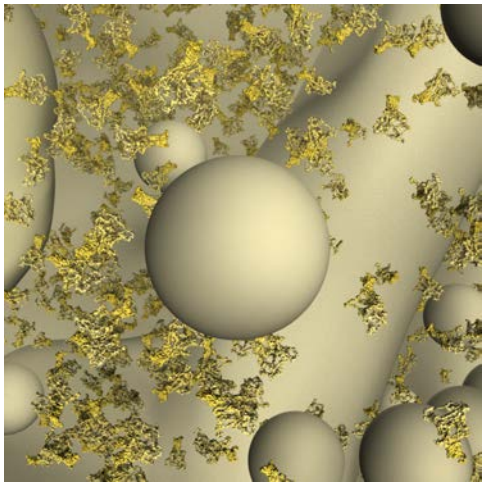
References:

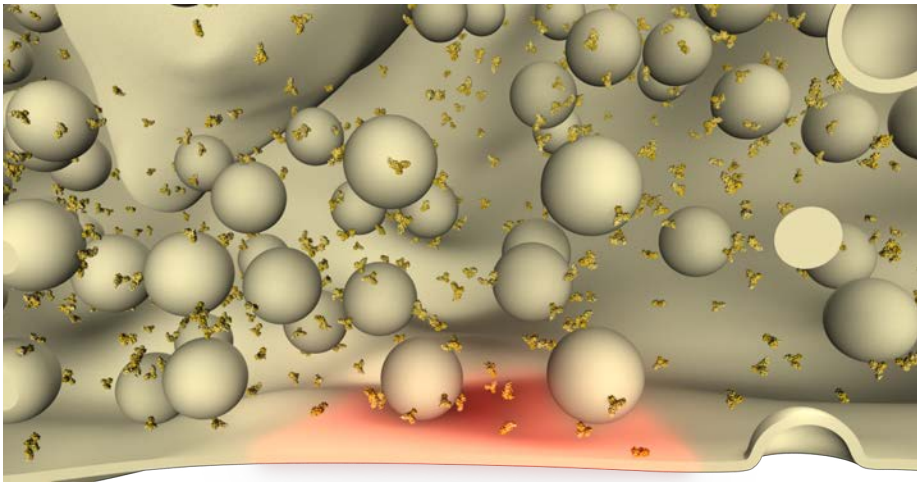
PDB-Identifier (structural information): 2jkr.
Honing, S., et al. (2005). Mol Cell 18, 519-31.
Collins, B.M., et al. (2002). Cell 109, 523-35.
Takamori, S., et al. (2006). Cell 127, 831-46.

AP 2 (mu2)

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.190	2324.70 ± 81.99	15.52



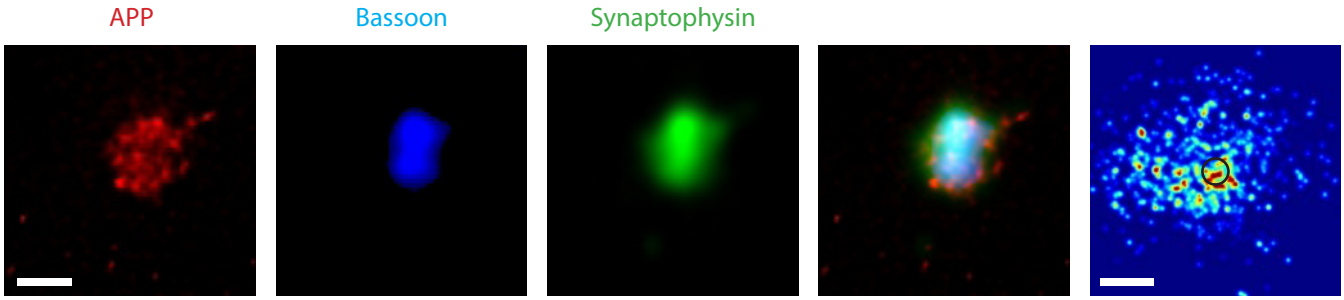




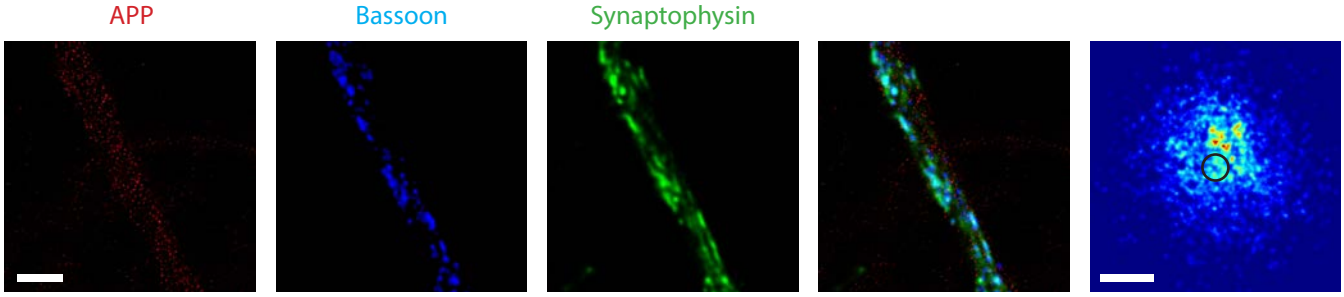
APP

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Disease-related	0.899	6283.60 ± 584.51	41.96

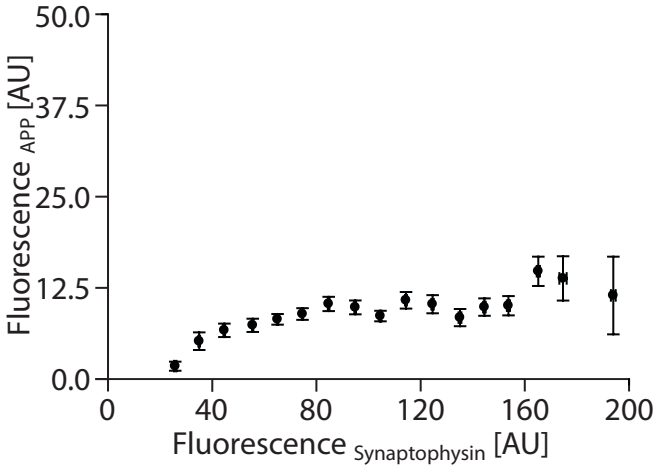
Synaptosomes (Cortex and Cerebellum, *Rattus norvegicus*)

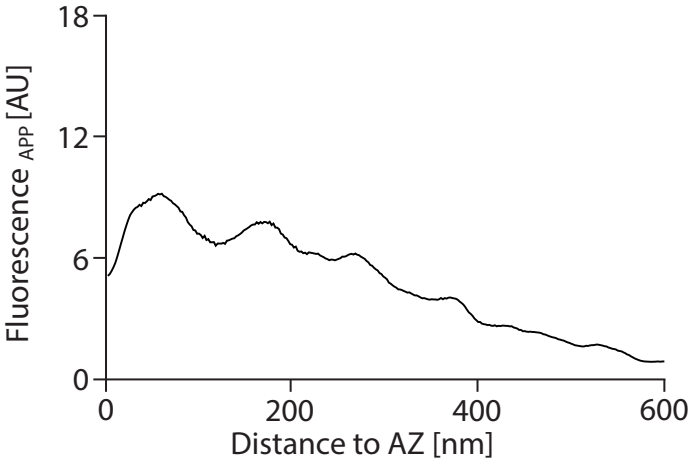


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for APP):

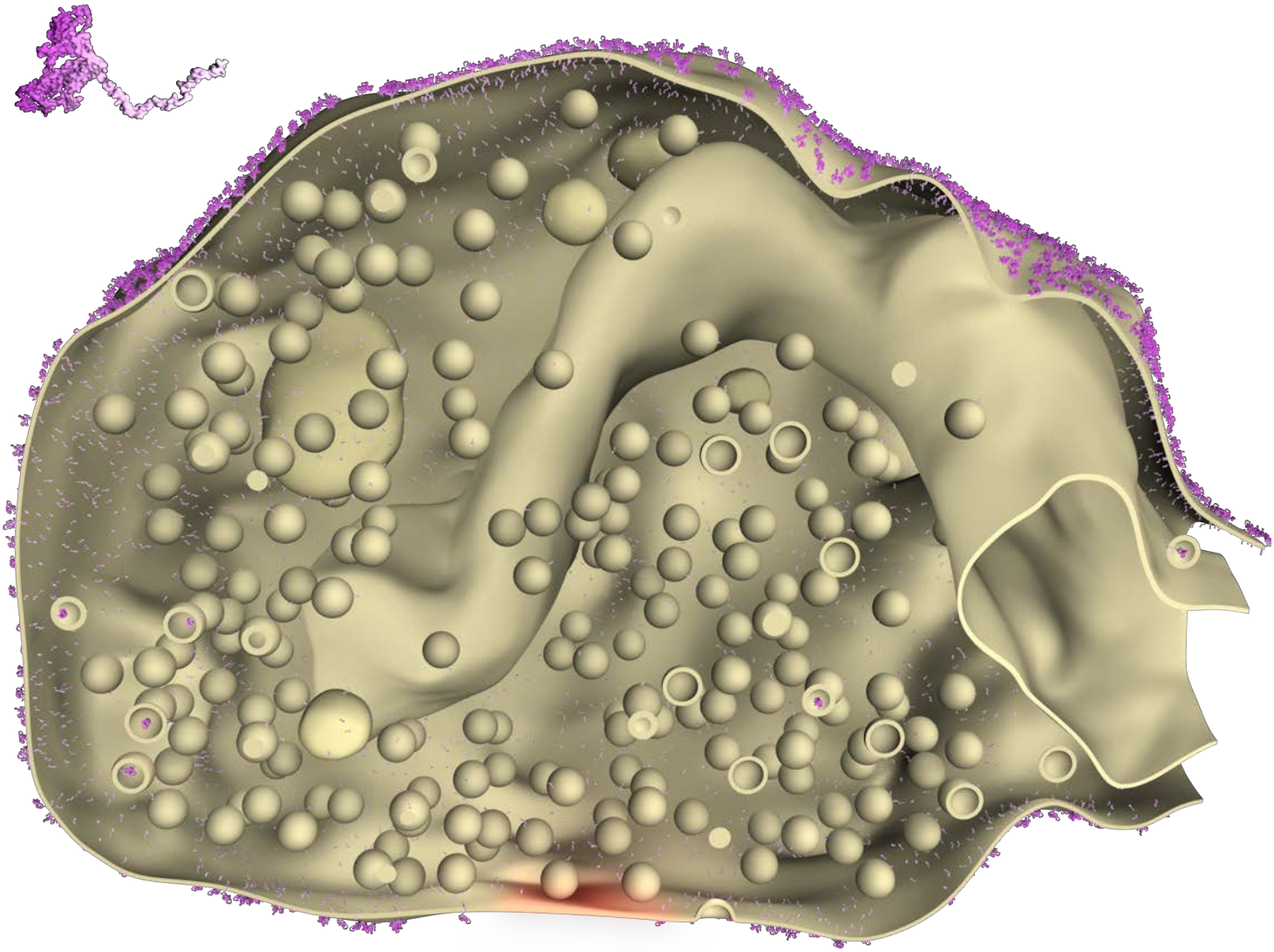
Immunoblots - Millipore (Billerica, Massachusetts, USA), MAB-348
Synaptosome stainings - Millipore (Billerica, Massachusetts, USA), MAB-348
HC stainings - Millipore (Billerica, Massachusetts, USA), MAB-348
NMJ stainings - Millipore (Billerica, Massachusetts, USA), MAB-348

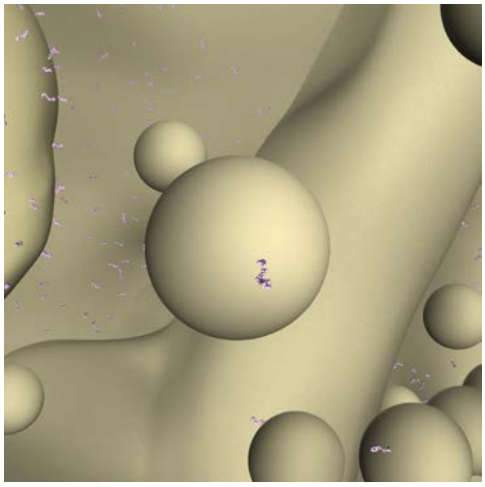
References:

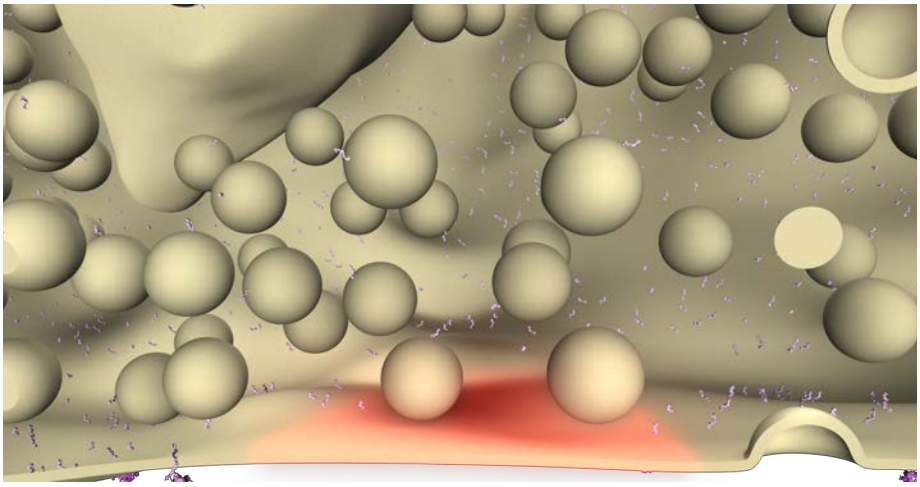
PDB-Identifier (structural information): 3nyl, 1iyt, 2roz, 3ktm.
Groemer, T.W., et al. (2011). PLoS One 6, e18754.
Haass, C., and Selkoe, D.J. (2007). Nat Rev Mol Cell Biol 8, 101-12.

APP

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Disease-related	0.899	6283.60 ± 584.51	28.35



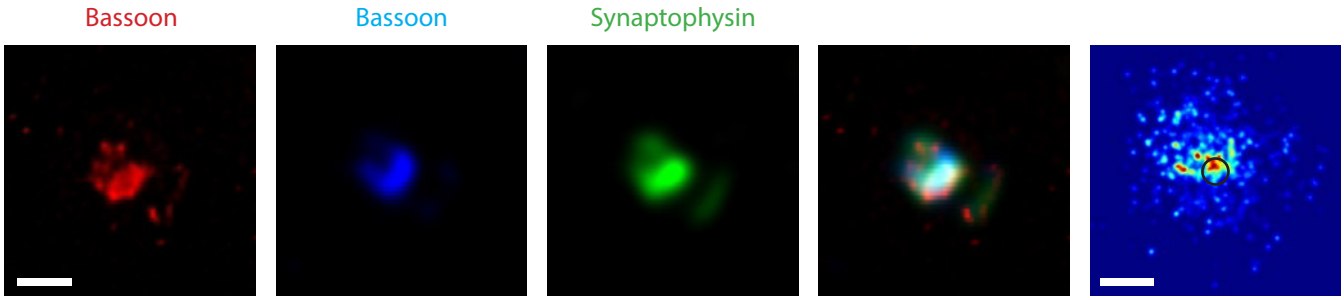




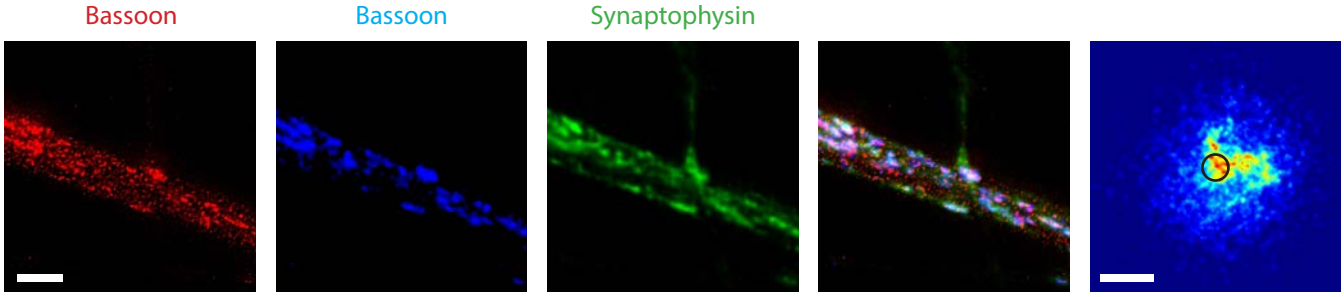
Bassoon

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Active zone	0.309	446.14 ± 37.71	2.98

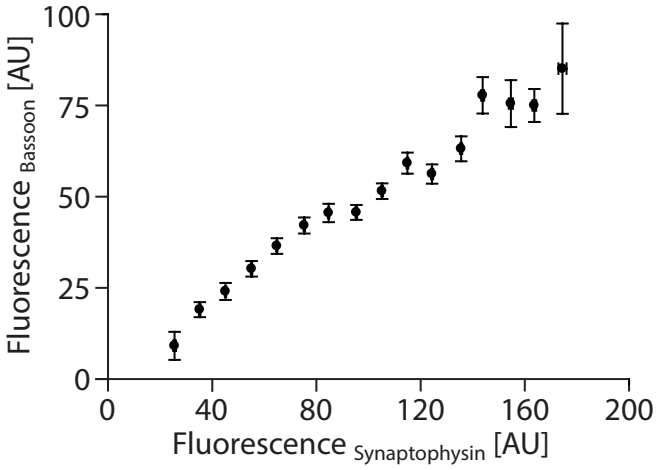
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

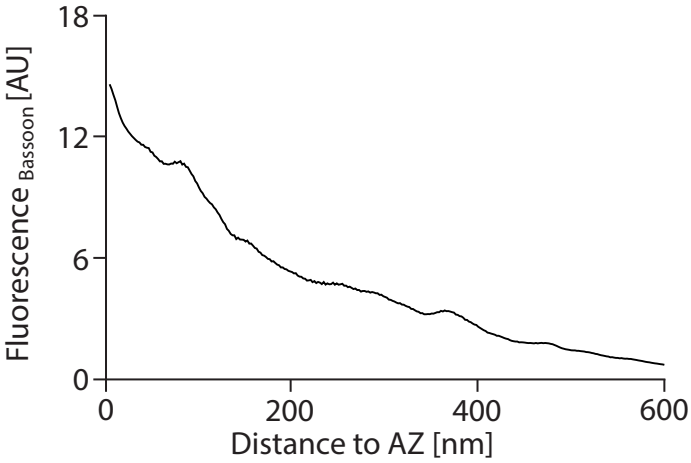


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Bassoon):

Immunoblots - not applicable

Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 141 002

HC stainings - Synaptic Systems (Göttingen, Germany), 141 021

NMJ stainings - Stressgene (Bruxelles, Belgium), ADI-VAM-PS003-D

References:

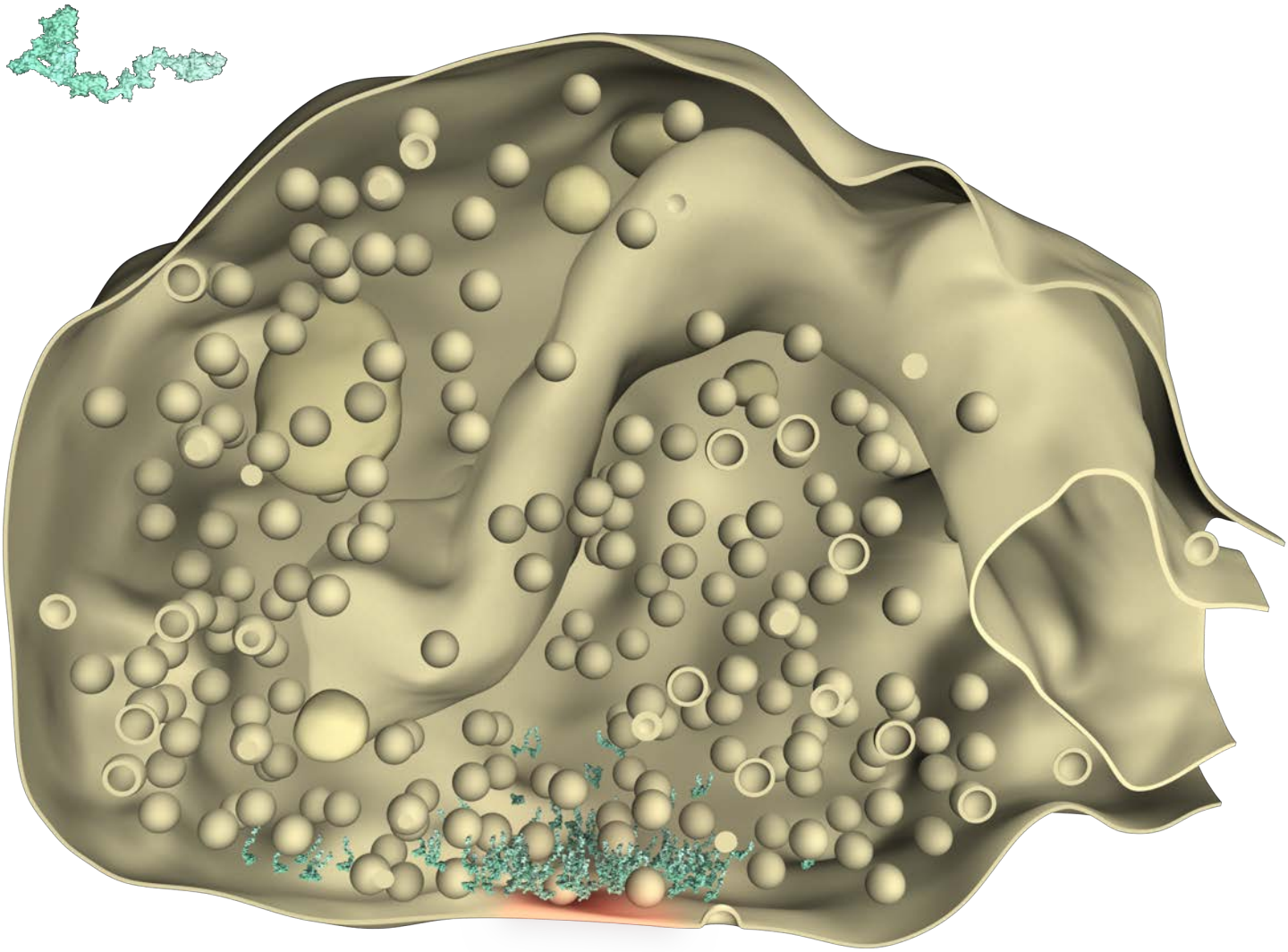
PDB-Identifier (structural information): not available; assembled from individual domains.

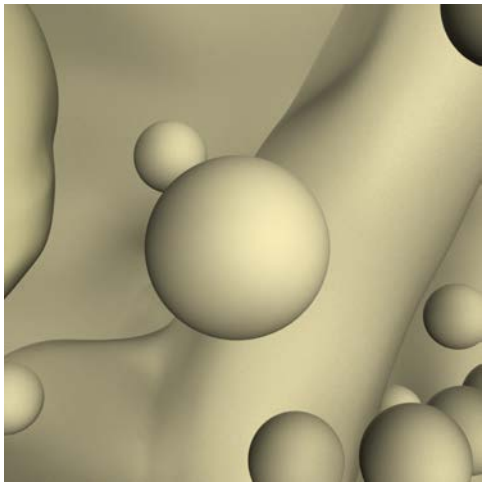
Dani, A., et al. (2010). Neuron 68, 843-56.

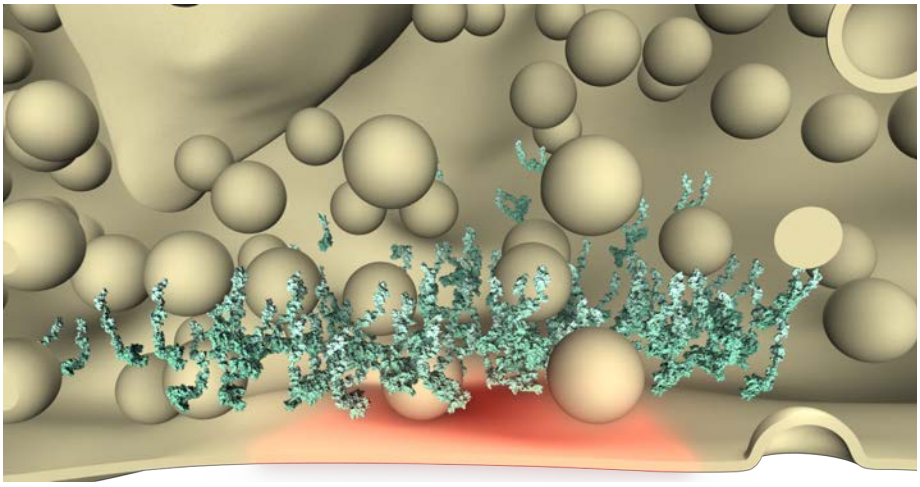
Garner, C. C., et al. (2000). Curr Opin Neurobiol 10, 321-7.

Bassoon

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Active zone	0.309	446.14 ± 37.71	2.98



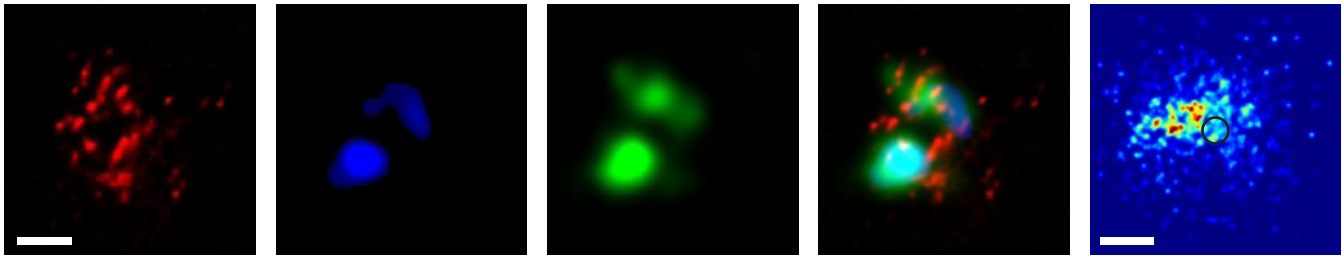




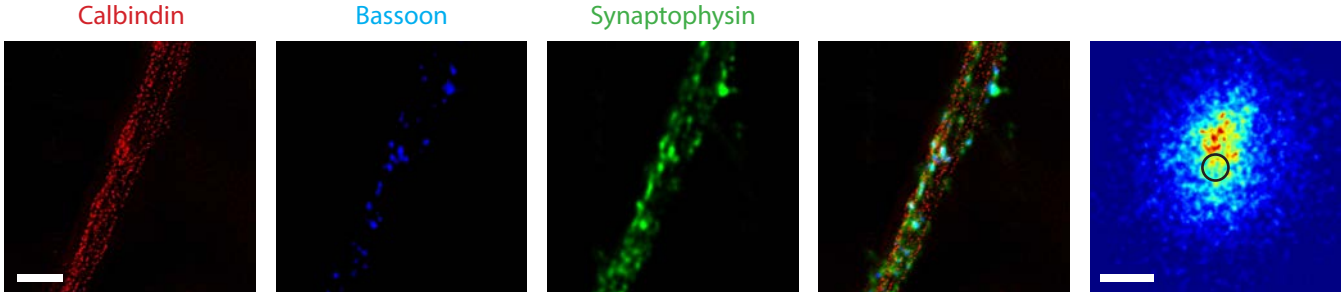
Calbindin

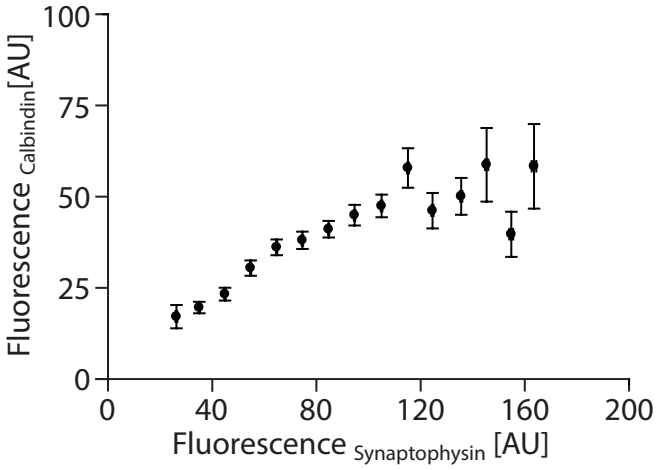
Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium buffer	0.015	296.88 ± 13.22	1.98

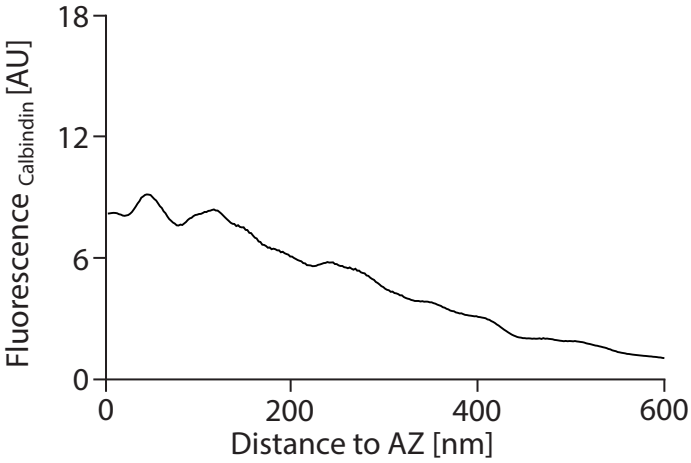
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)



Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)







Antibodies used (for Calbindin):

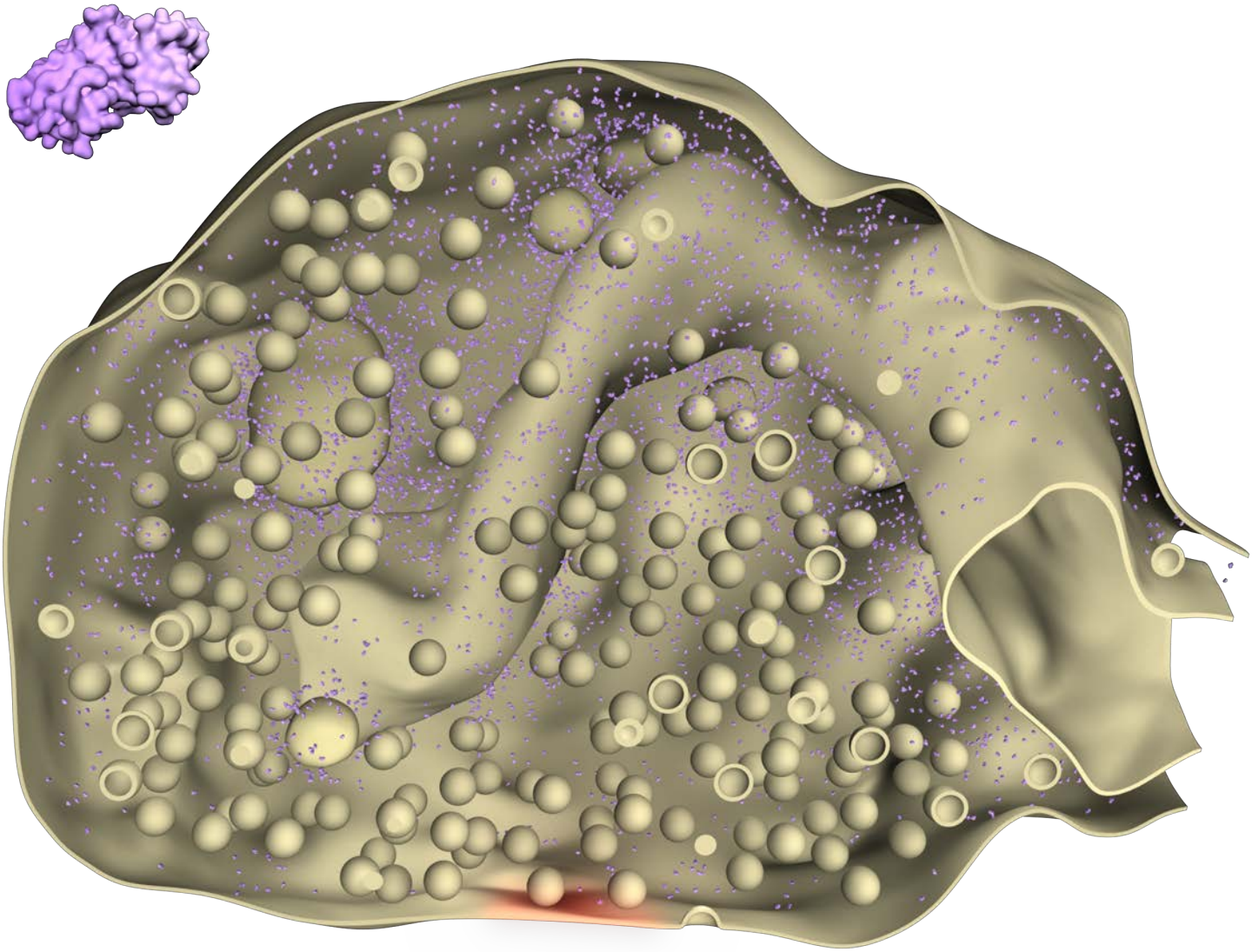
Immunoblots - Swant (Marly, Switzerland), CB-38
Slice/Synaptosome stainings - Swant (Marly, Switzerland), CB-38
HC stainings - Swant (Marly, Switzerland), CB-38
NMJ stainings - not applicable

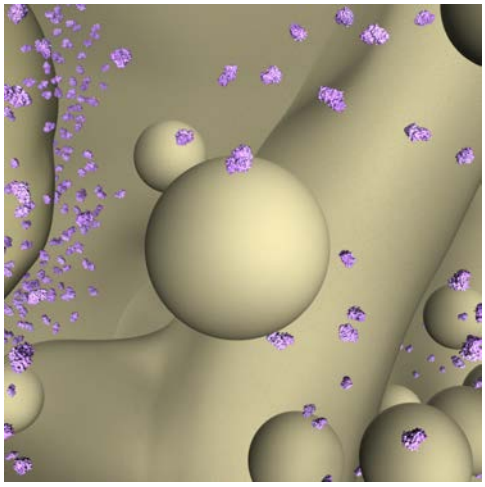
References:

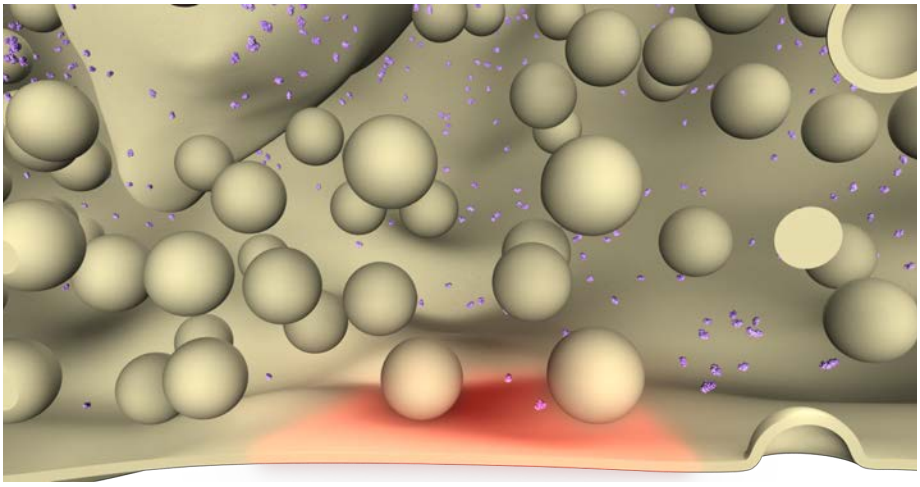
PDB-Identifier (structural information): not available; assembled from individual domains.
Schwaller, B. (2010). Cold Spring Harb Perspect Biol 2, a004051.
Schwaller, B., et al. (2002). Cerebellum 1, 241-58.

Calbindin

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium buffer	0.015	296.88 ± 13.22	1.98



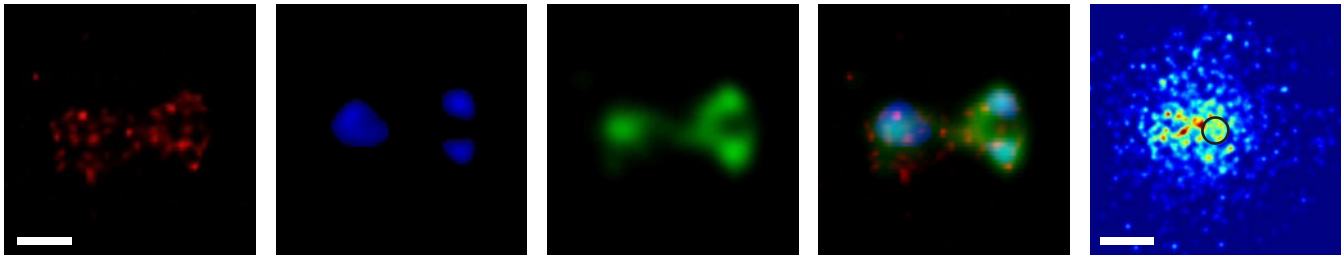




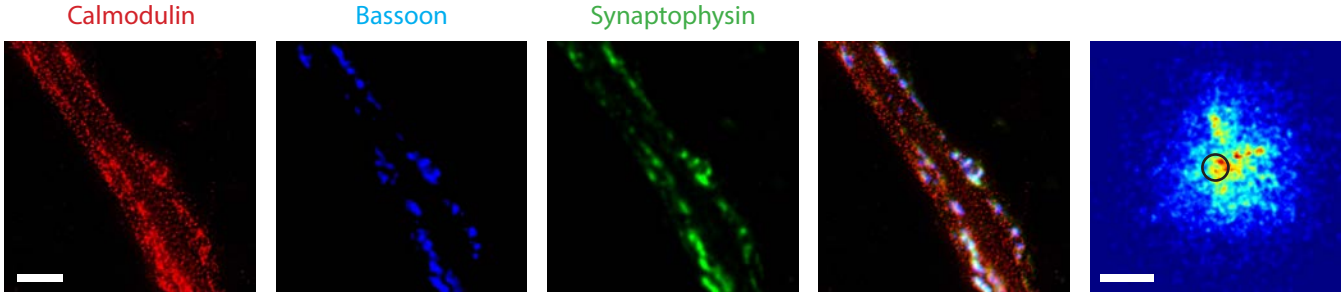
Calmodulin

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium Sensor	0.241	8659.90 ± 445.47	57.82

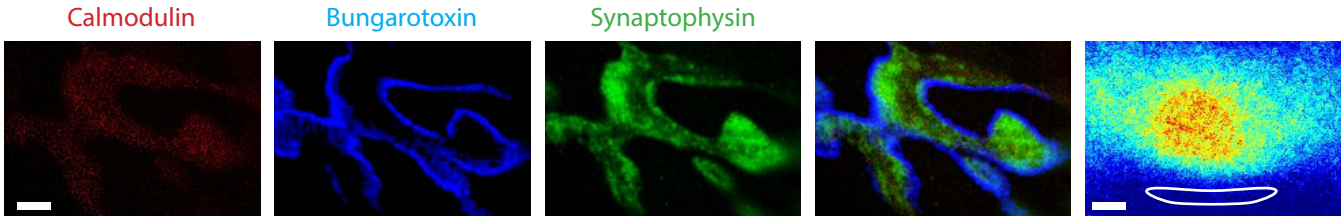
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

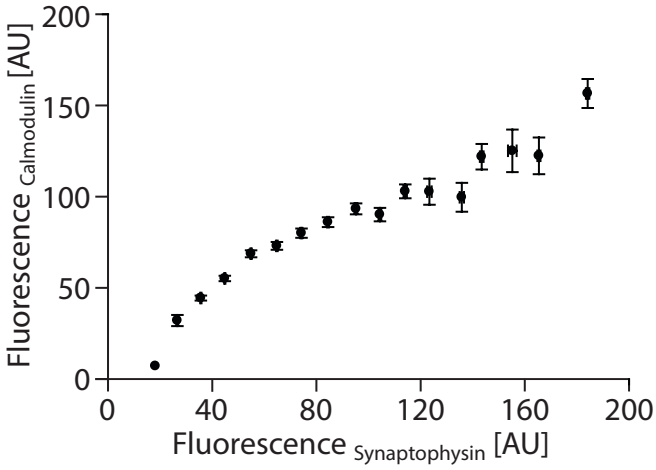


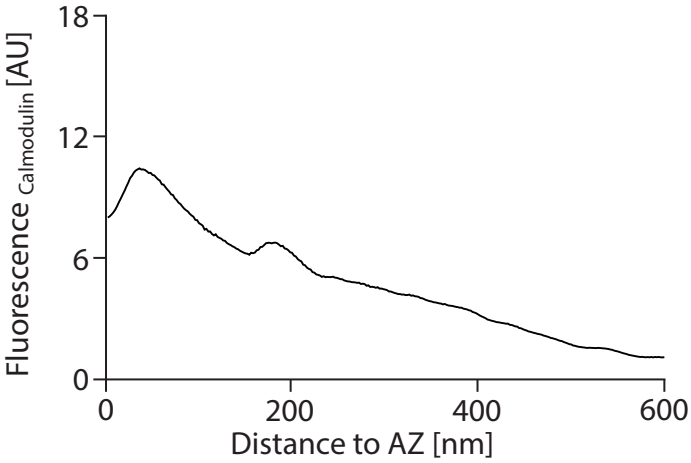
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Calmodulin):

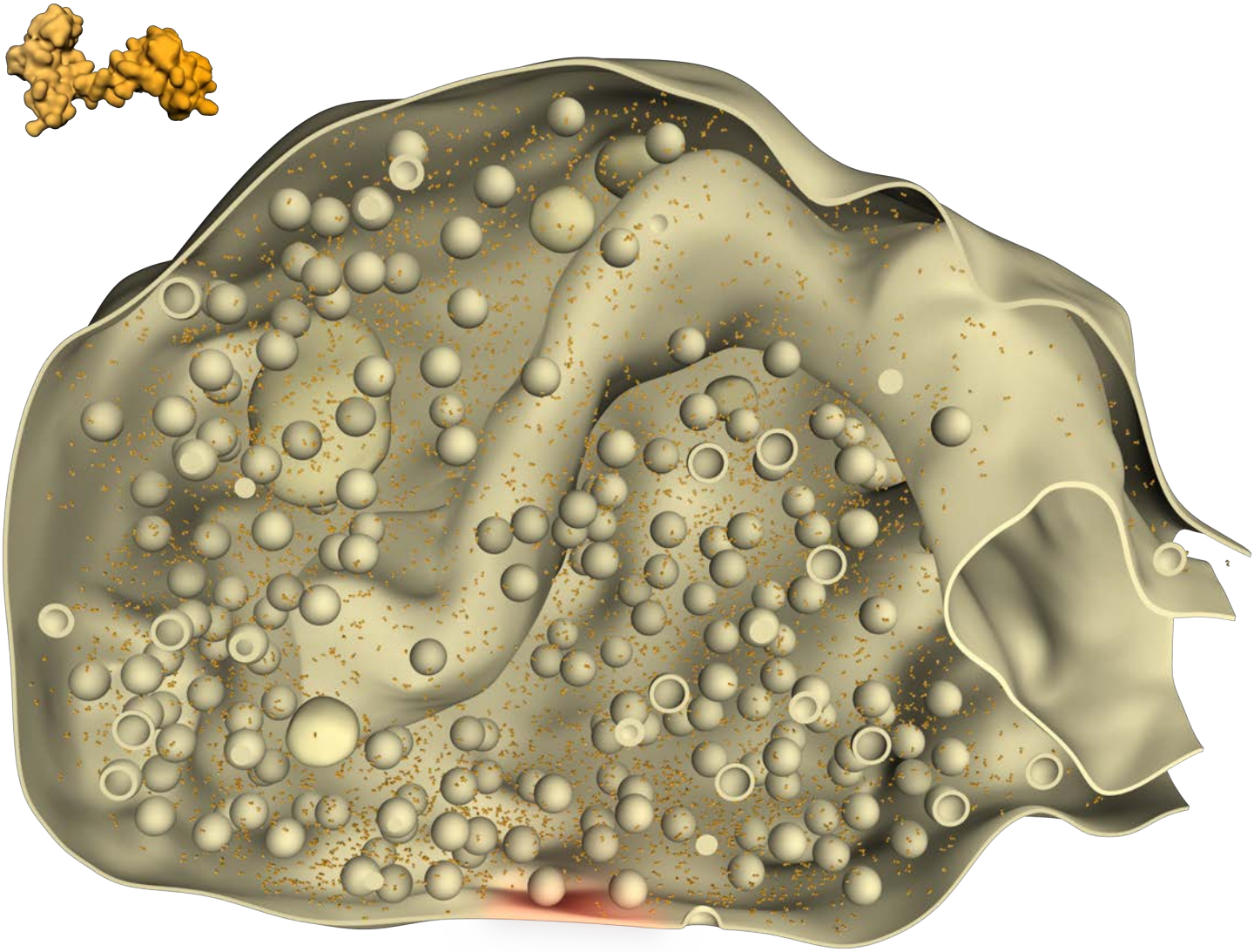
Immunoblots - Novus Biologicals (Littleton, Colorado, USA), NB110-55649
Slice/synaptosome stainings - Novus Biologicals (Littleton, Colorado, USA), NB110-55649
HC stainings - Novus Biologicals (Littleton, Colorado, USA), NB110-55649

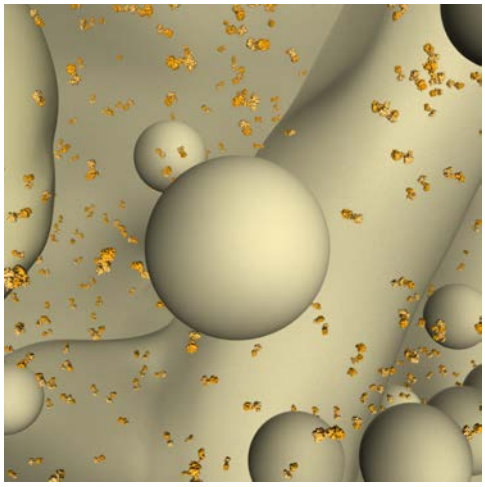
References:

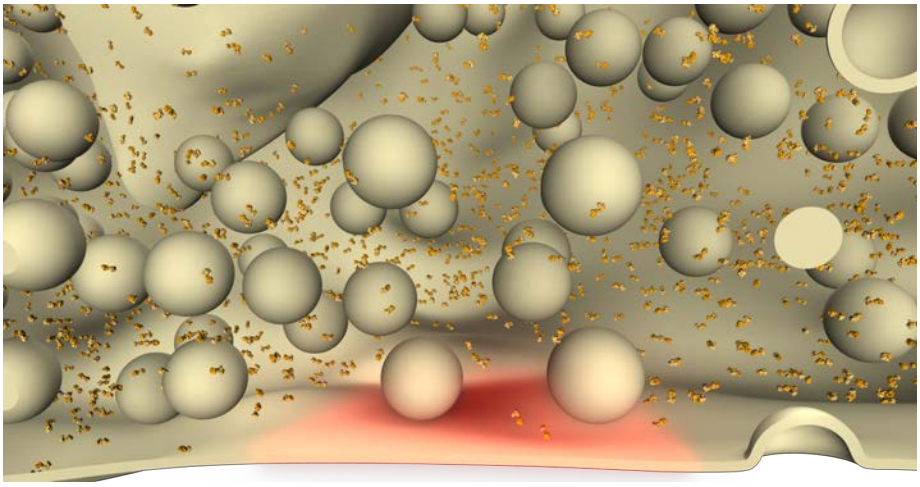
PDB-Identifier (structural information): 3cln.
Chin, D., and Means, A.R. (2000). Trends Cell Biol 10, 322-28.
Quetglas, S., et al. (2002). EMBO J 21, 3970-9.
Igarashi, M., and Watanabe, M. (2007). Neurosci Res 58, 226-33.

Calmodulin

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium Sensor	0.241	8659.90 ± 445.47	57.82



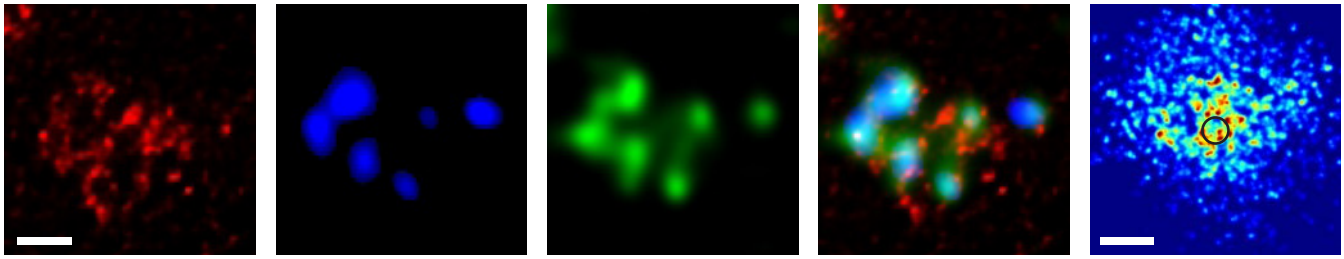




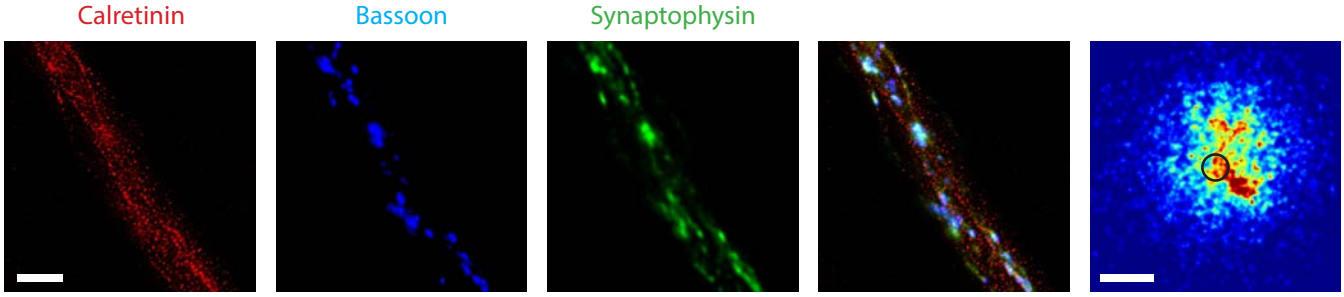
Calretinin

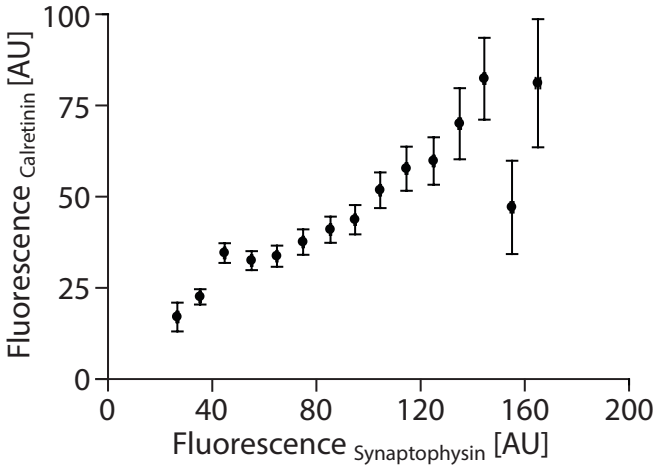
Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium buffer	0.019	369.24 ± 5.49	2.47

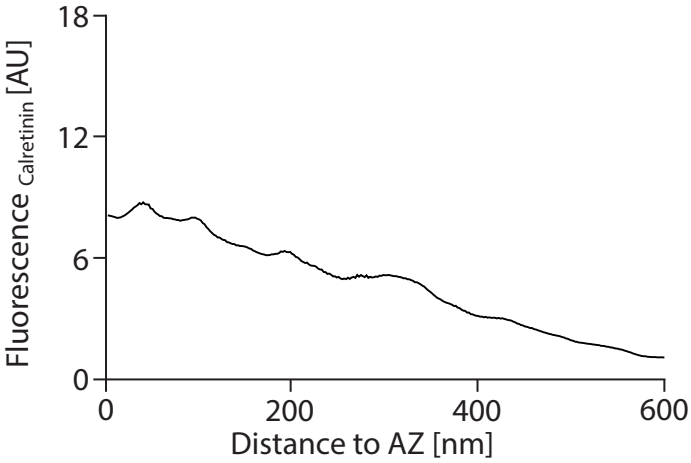
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)



Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)







Antibodies used (for Calretinin):

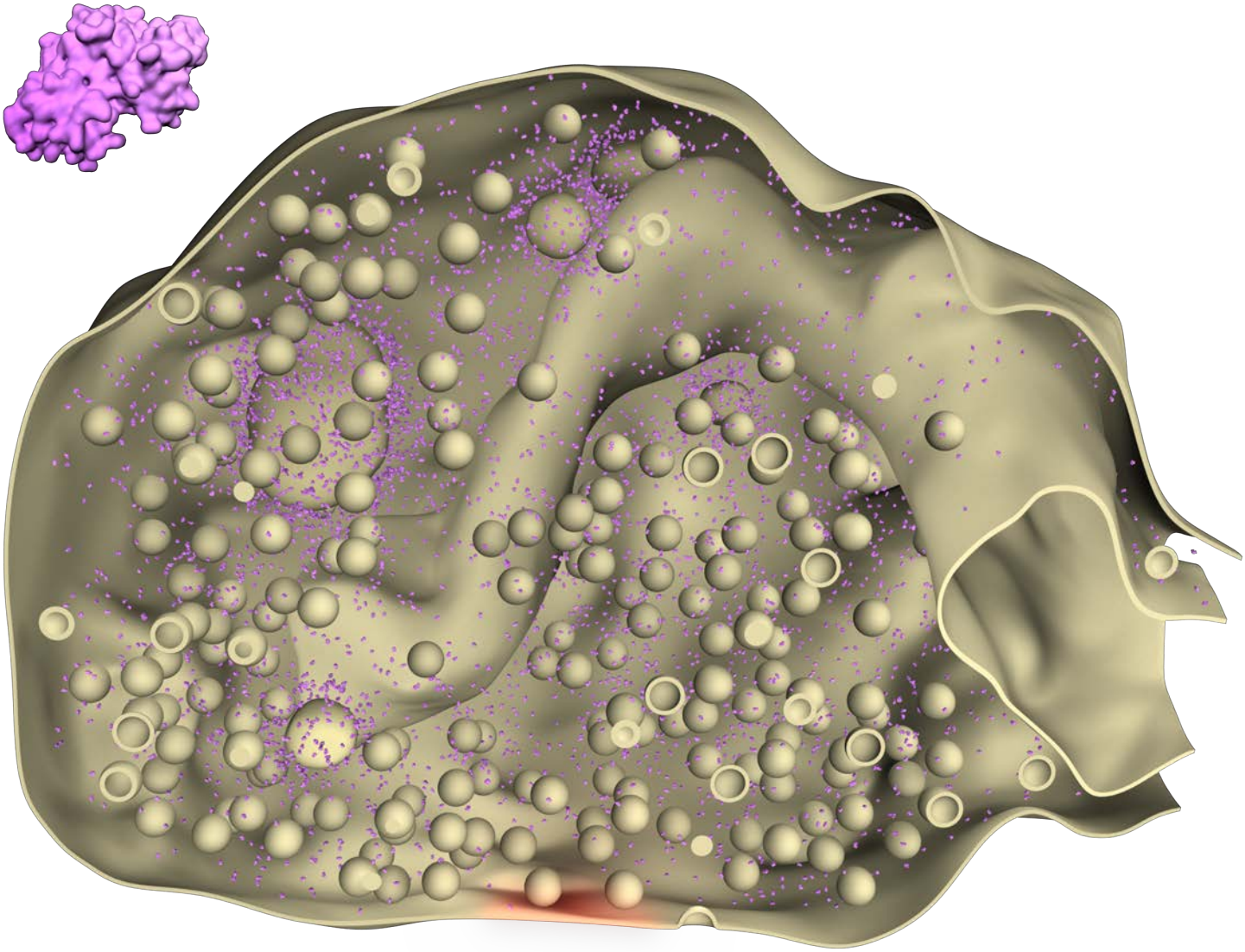
Immunoblots - Swant (Marly, Switzerland), 7699/3H
Slice/Synaptosome stainings - Swant (Marly, Switzerland), 7699/3H
HC stainings - Swant (Marly, Switzerland), 7699/3H
NMJ stainings - not applicable

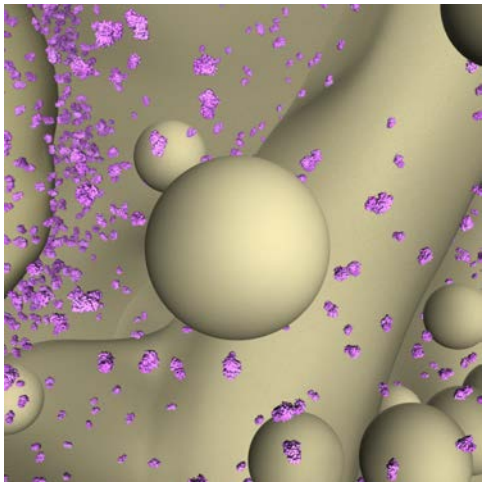
References:

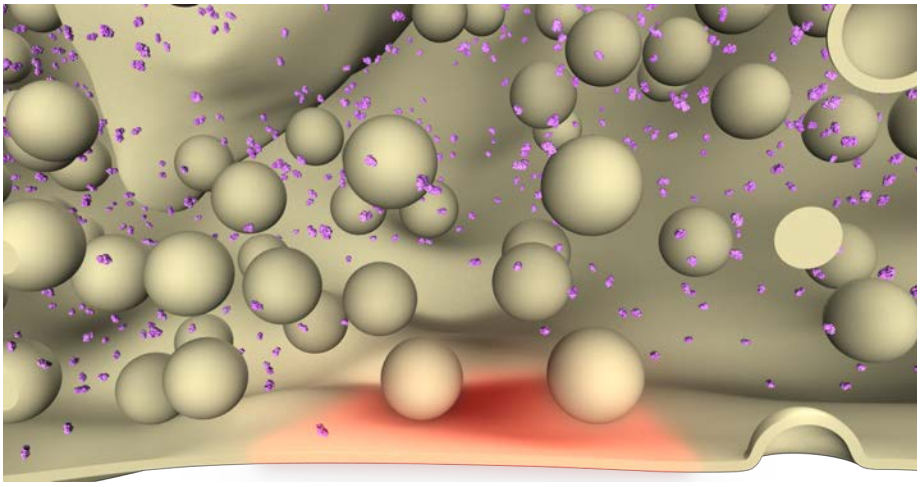
PDB-Identifier (structural information): not available; assembled from individual domains.
Schwaller, B. (2010). Cold Spring Harb Perspect Biol 2, a004051.
Schwaller, B., et al. (2002). Cerebellum 1, 241-58.

Calretinin

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium buffer	0.019	369.24 ± 5.49	2.47



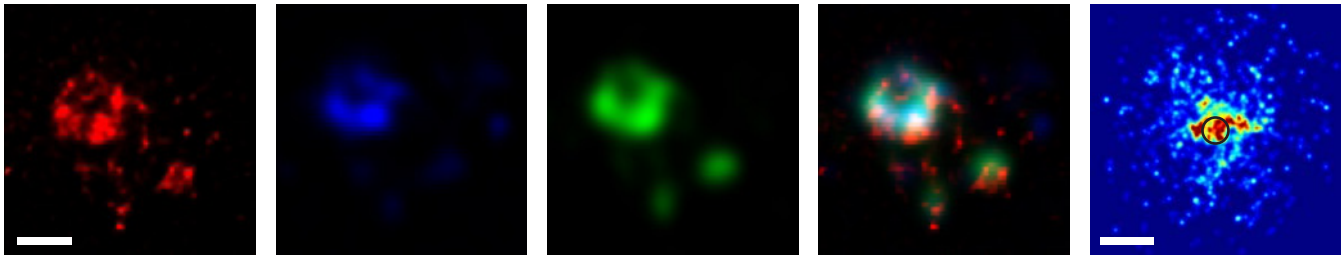




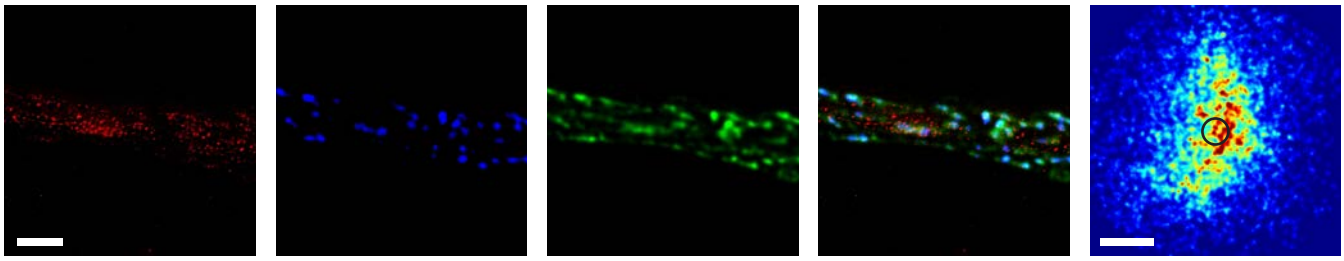
CAPS

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Exocytosis	0.048	196.42 ± 28.58	1.31

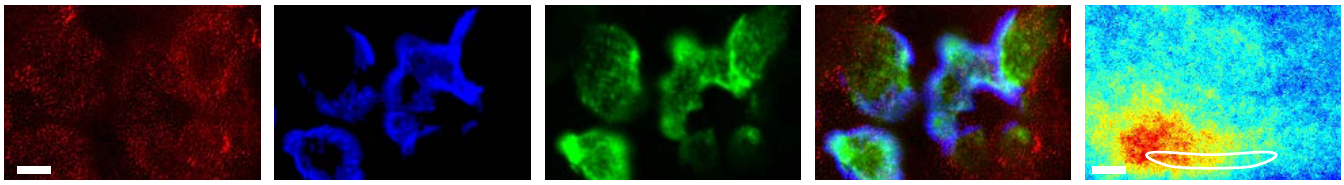
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

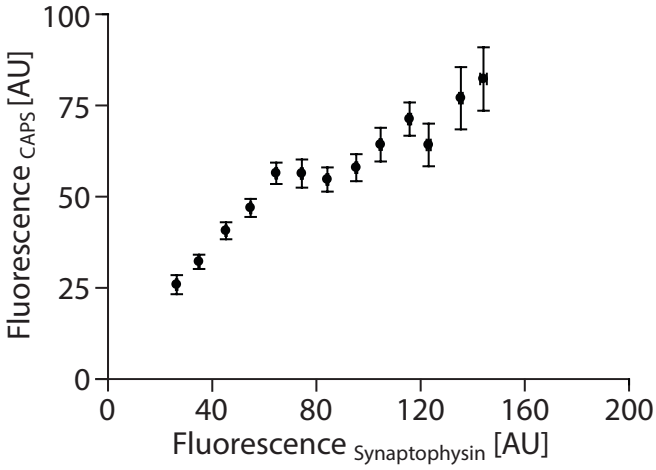


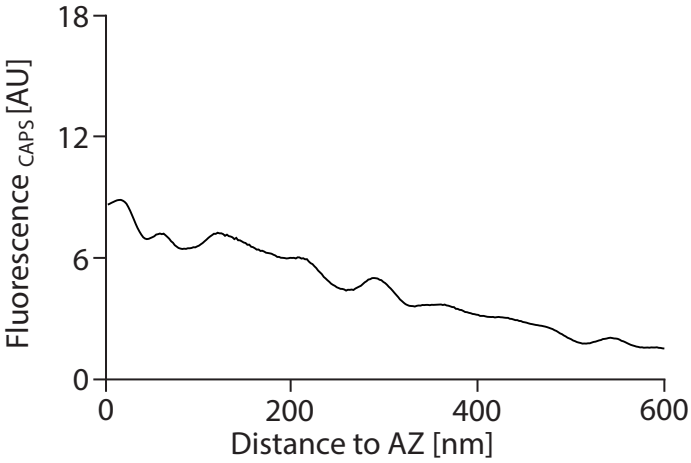
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for CAPS):

Immunoblots - not applicable

Synaptosome stainings - Abcam (Cambridge, England), ab69797

HC stainings - Abcam (Cambridge, England), ab69797

NMJ stainings - Abcam (Cambridge, England), ab69797

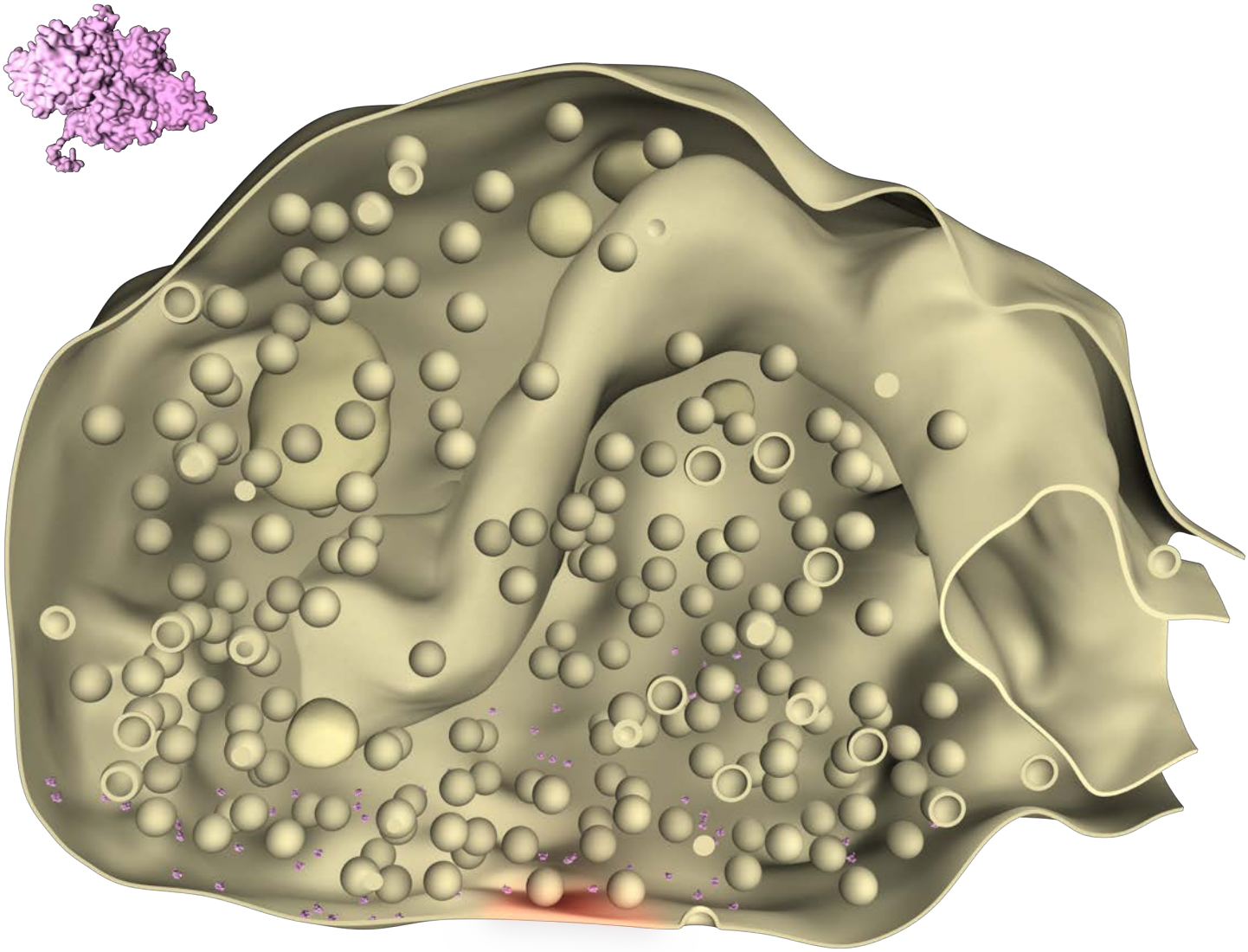
References:

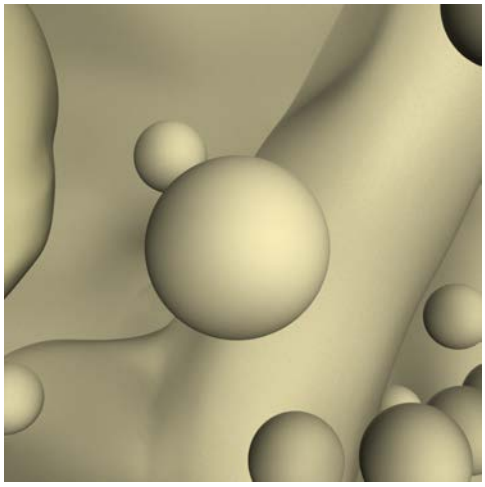
PDB-Identifier (structural information): 1wi1, 1a25, 3swh.

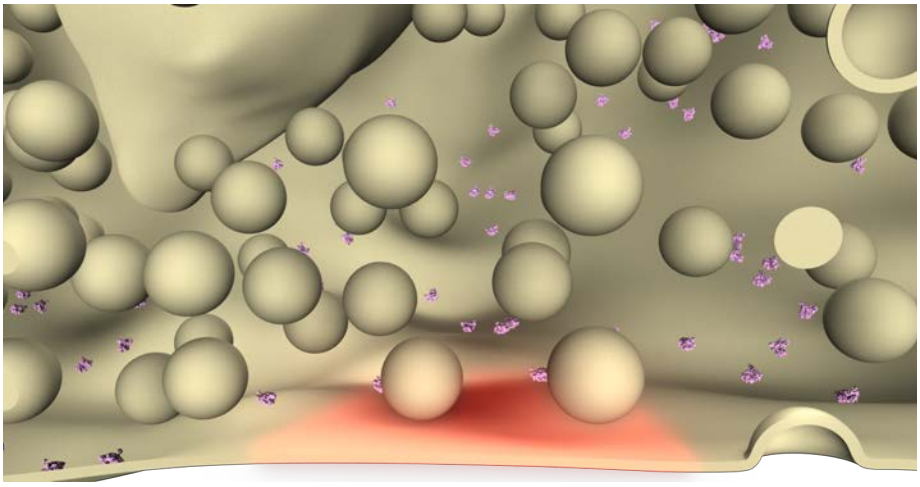
Stevens, D. R. and Rettig, J. (2009). Mol Neurobiol 39, 62-72.

CAPS

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Exocytosis	0.048	196.42 ± 28.58	1.31





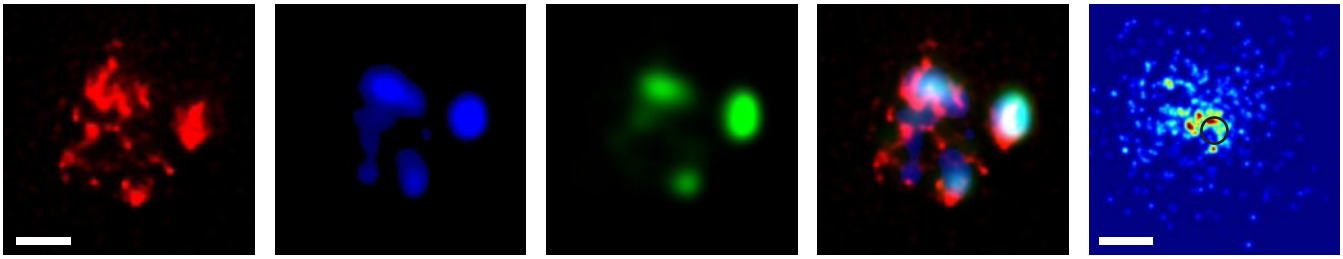


Clathrin heavy chain

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.649	3472.47 ± 174.65	23.18

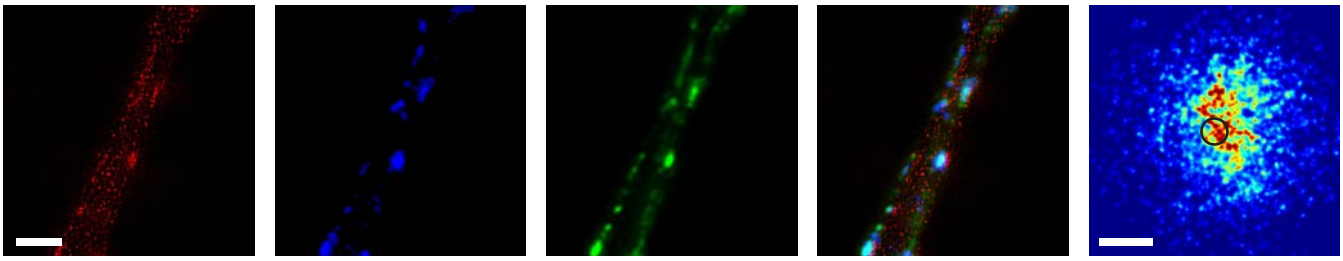
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

Clathrin heavy chain | Bassoon | Synaptophysin



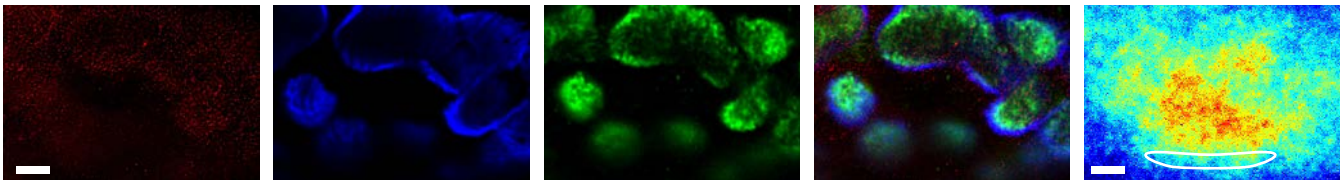
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

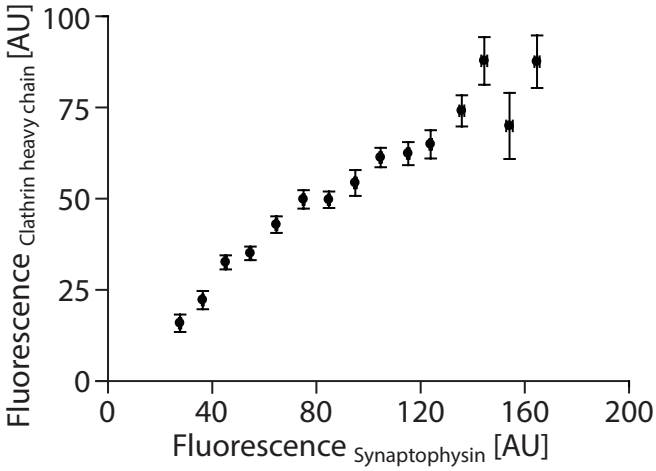
Clathrin heavy chain | Bassoon | Synaptophysin

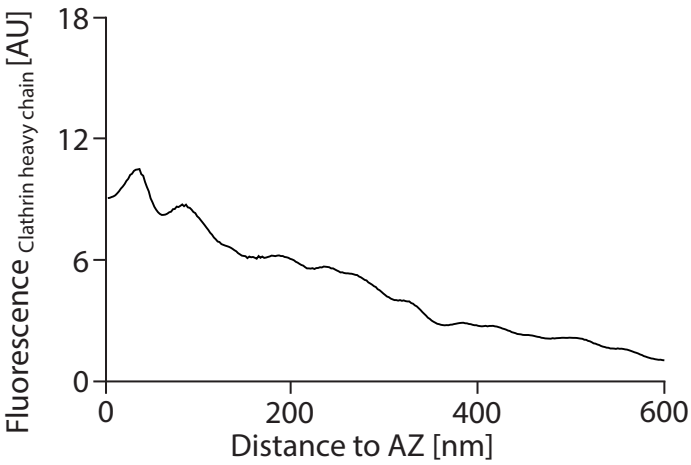


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

Clathrin heavy chain | Bungarotoxin | Synaptophysin







Antibodies used (for Clathrin heavy chain):

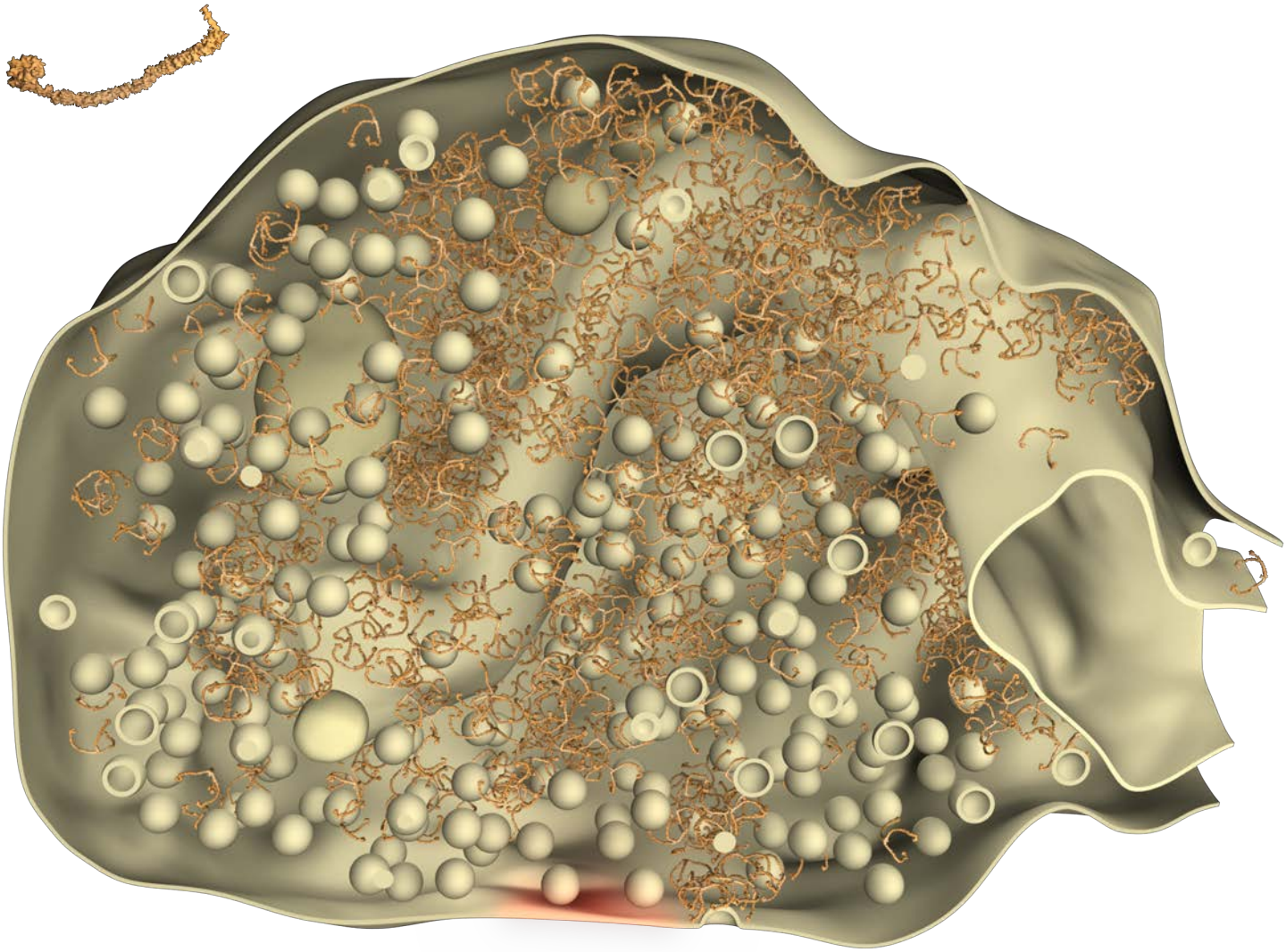
Immunoblots - Volker Haucke (FMP, Berlin, Germany)
Slice/synaptosome stainings - BD Biosciences (Göttingen, Germany), 610499
HC stainings - BD Biosciences (Göttingen, Germany), 610499
NMJ stainings - BD Biosciences (Göttingen, Germany), 610499

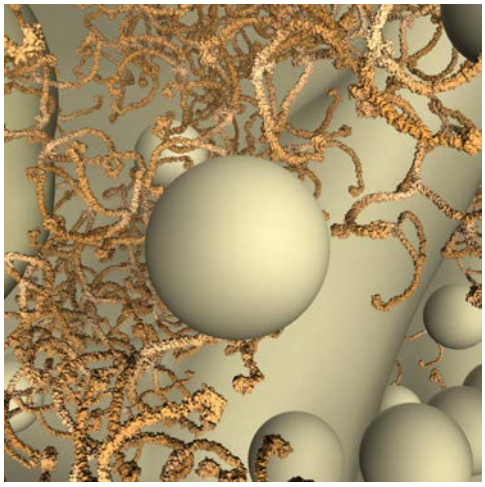
References:

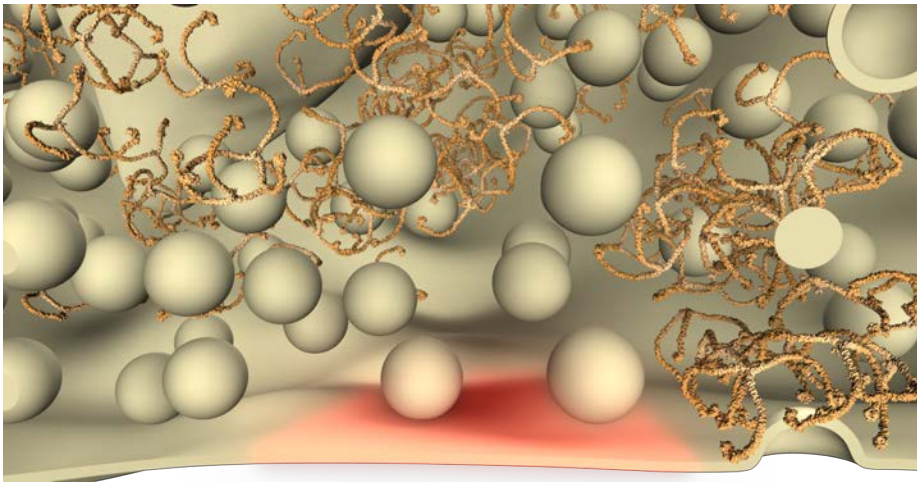
PDB-Identifier (structural information): 3iyv, 1bpo.
Royle, S.J., Lagnado, L. (2010). Traffic 11, 1489-97.
Cheng, Y., et al. (2007). J Mol Biol 365, 892-9.
Wigge, P., et al. (1997). Mol Biol Cell 8, 2003-15.
Musacchio, A., et al. (1999). Mol Cell 3, 761-70.

Clathrin heavy chain

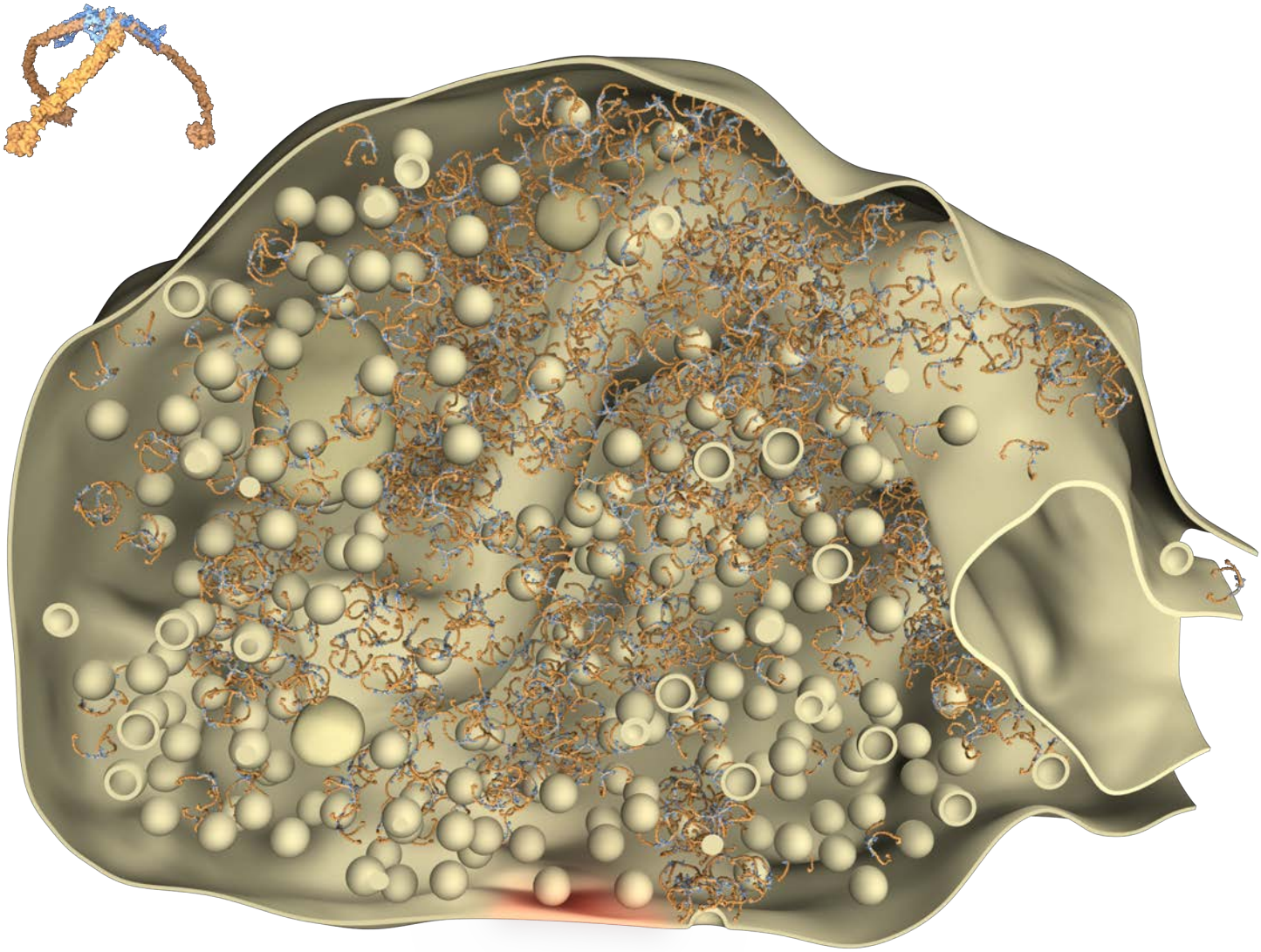
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.649	3472.47 ± 174.65	23.18

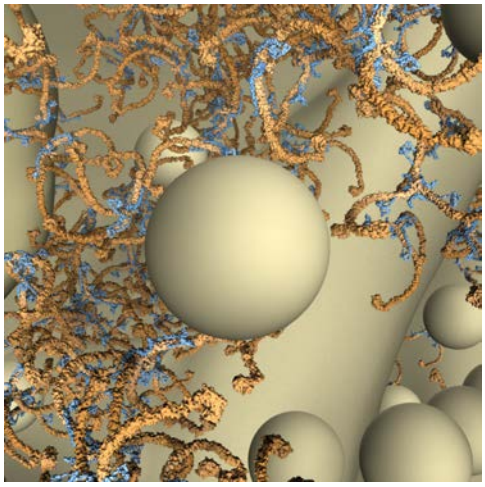


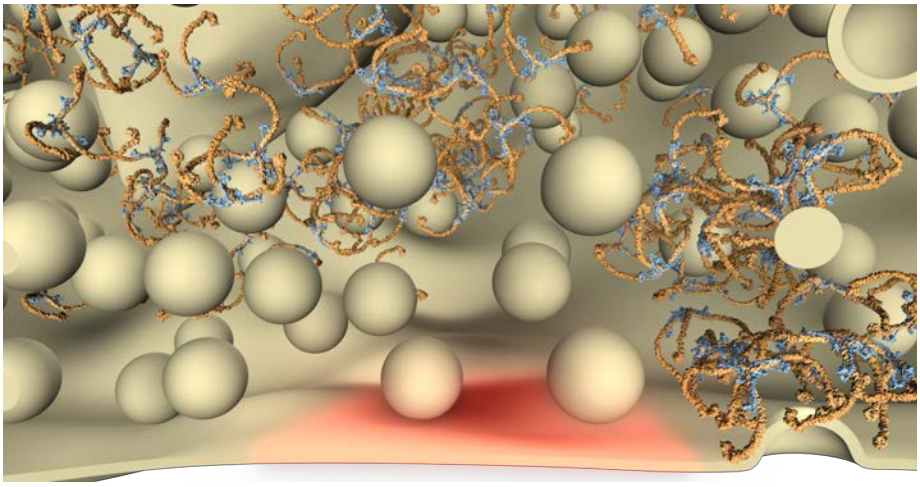




Clathrin Triskelia





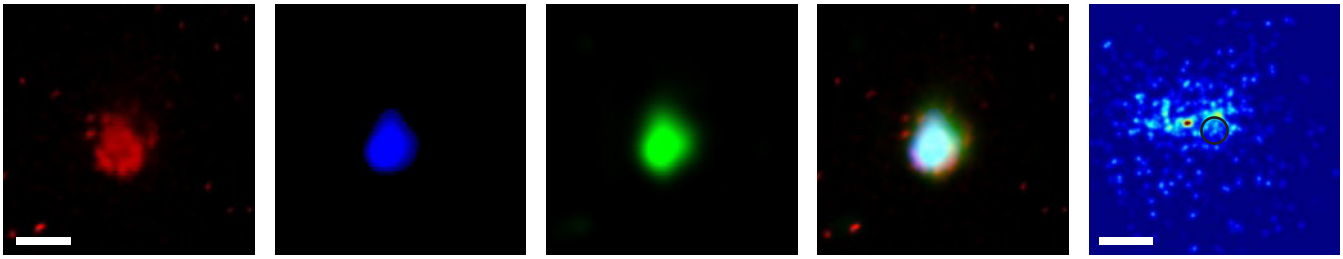


Clathrin light chain

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.076	4554.06 ± 296.74	30.41

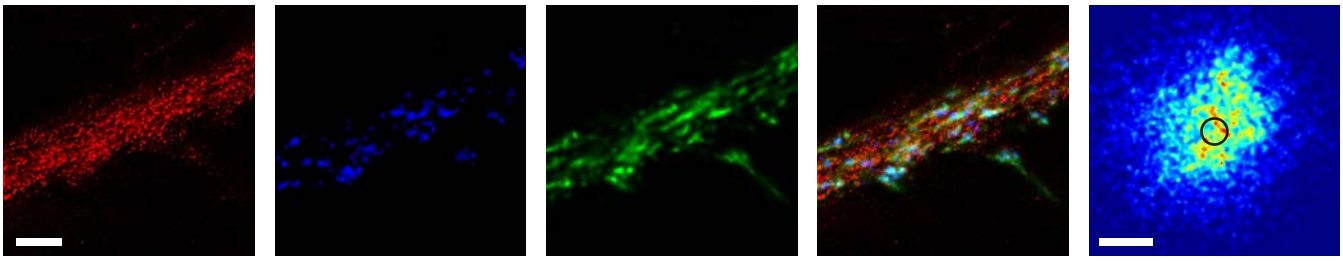
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

Clathrin light chain | Bassoon | Synaptophysin



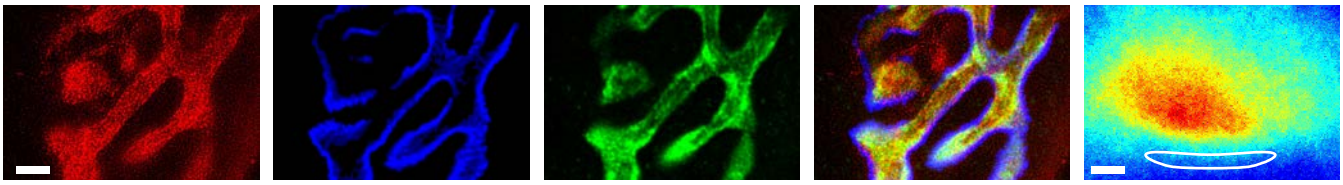
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

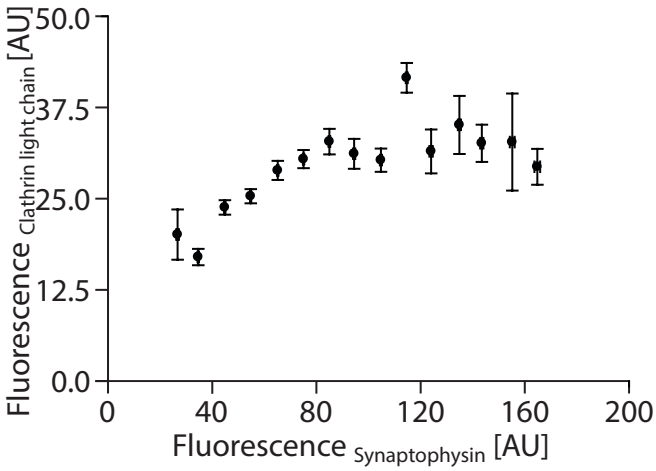
Clathrin light chain | Bassoon | Synaptophysin

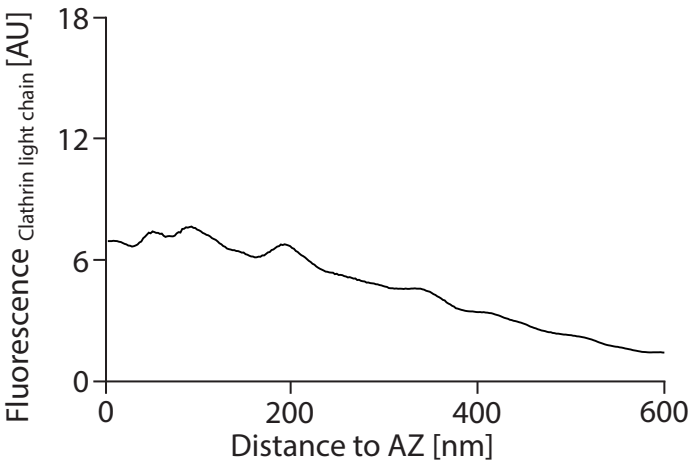


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

Clathrin light chain | Bungarotoxin | Synaptophysin







Antibodies used (for Clathrin light chain):

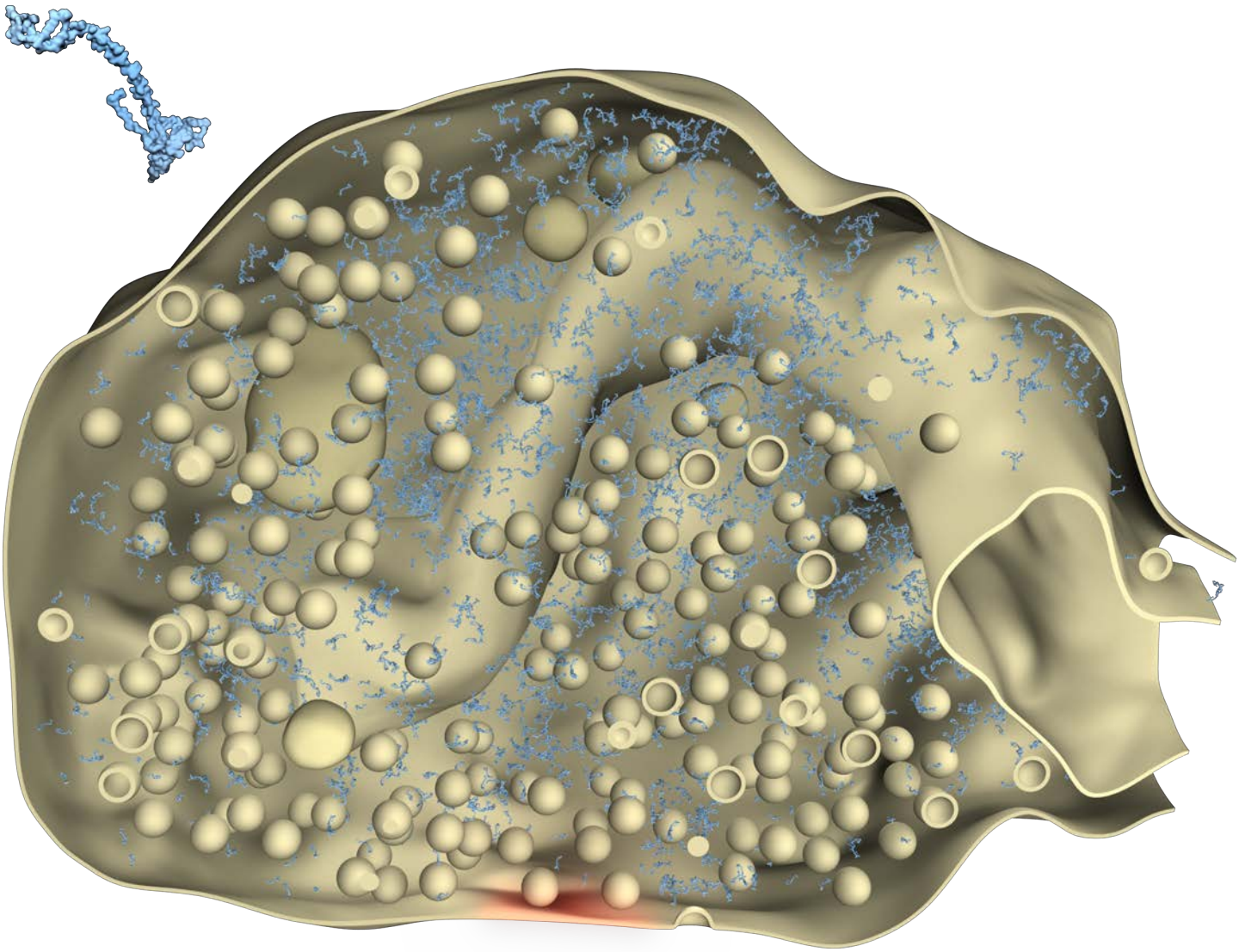
Immunoblots - Novus Biologicals (Cambridge, England), NBP1-05035
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 113 001
HC stainings - Synaptic Systems (Göttingen, Germany), 113 001

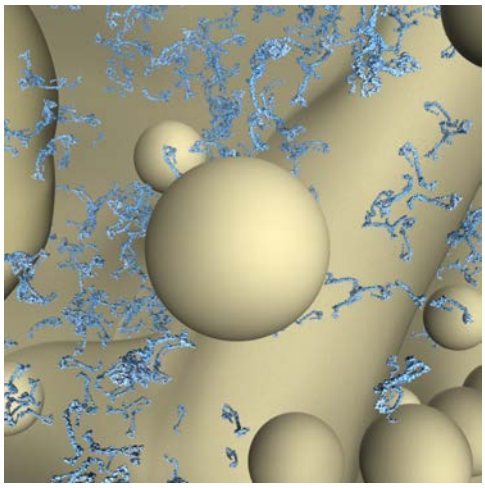
References:

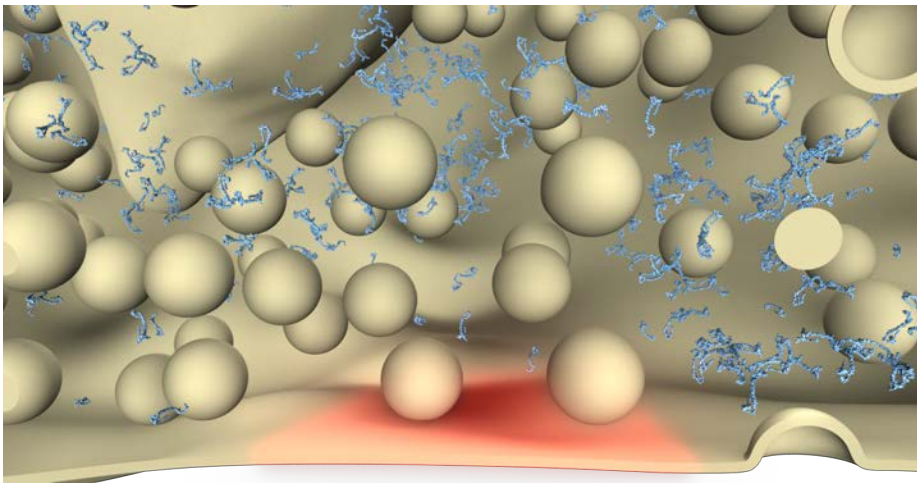
PDB-Identifier (structural information): 3lvg.
Royle, S.J., Lagnado, L. (2010). Traffic 11, 1489-97.
Cheng, Y., et al. (2007). J Mol Biol 365, 892-9.
Wigge, P., et al. (1997). Mol Biol Cell 8, 2003-15.
Musacchio, A., et al. (1999). Mol Cell 3, 761-70.

Clathrin light chain

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.076	4554.06 ± 296.74	30.41



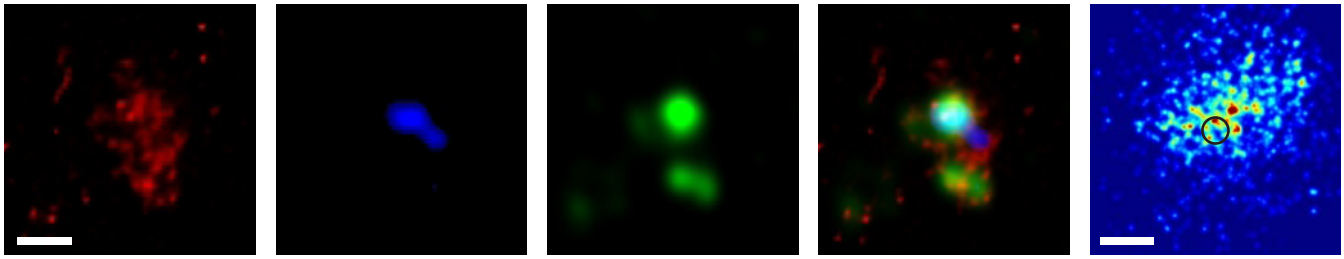




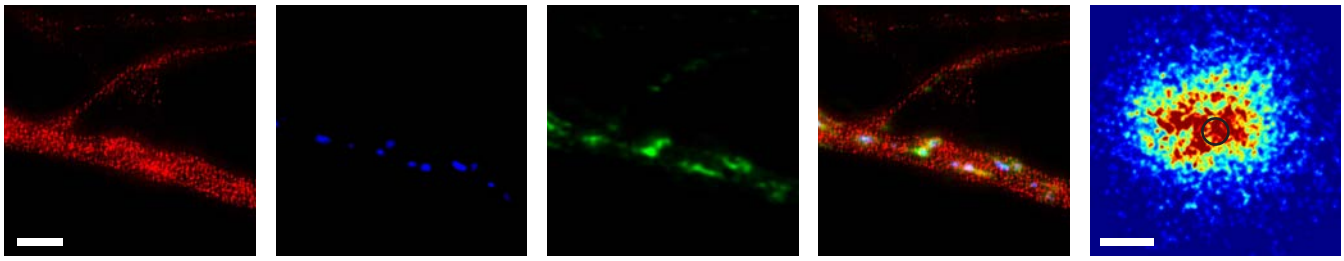
Complexin 1/2

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE co-factor	0.052	2488.2 ± 149.49	16.59

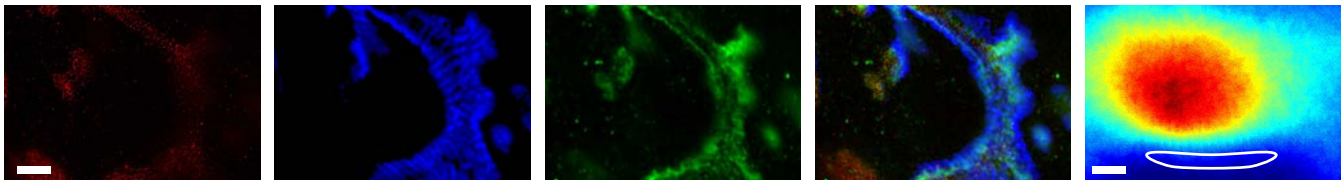
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

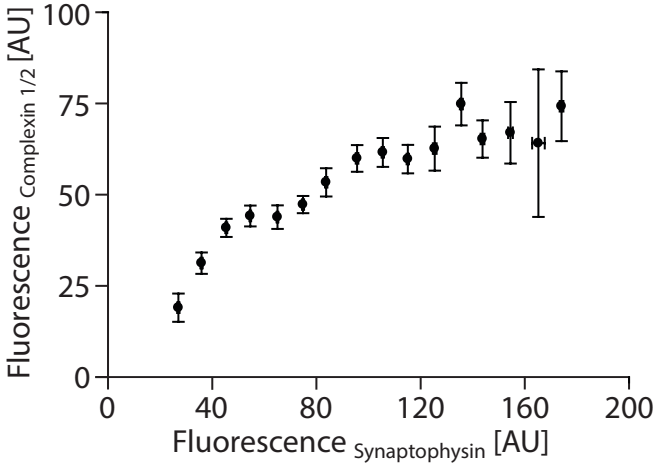


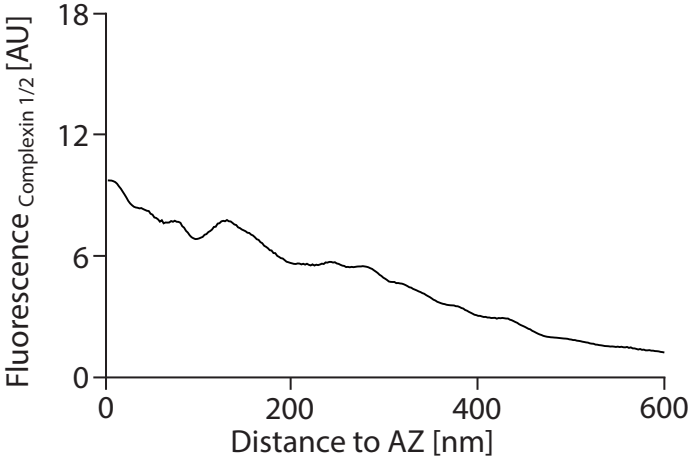
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Complexin 1/2):

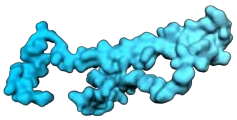
Immunoblots - Synaptic Systems (Göttingen, Germany), 122 102
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 122 002
HC stainings - Synaptic Systems (Göttingen, Germany), 122 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 122 002

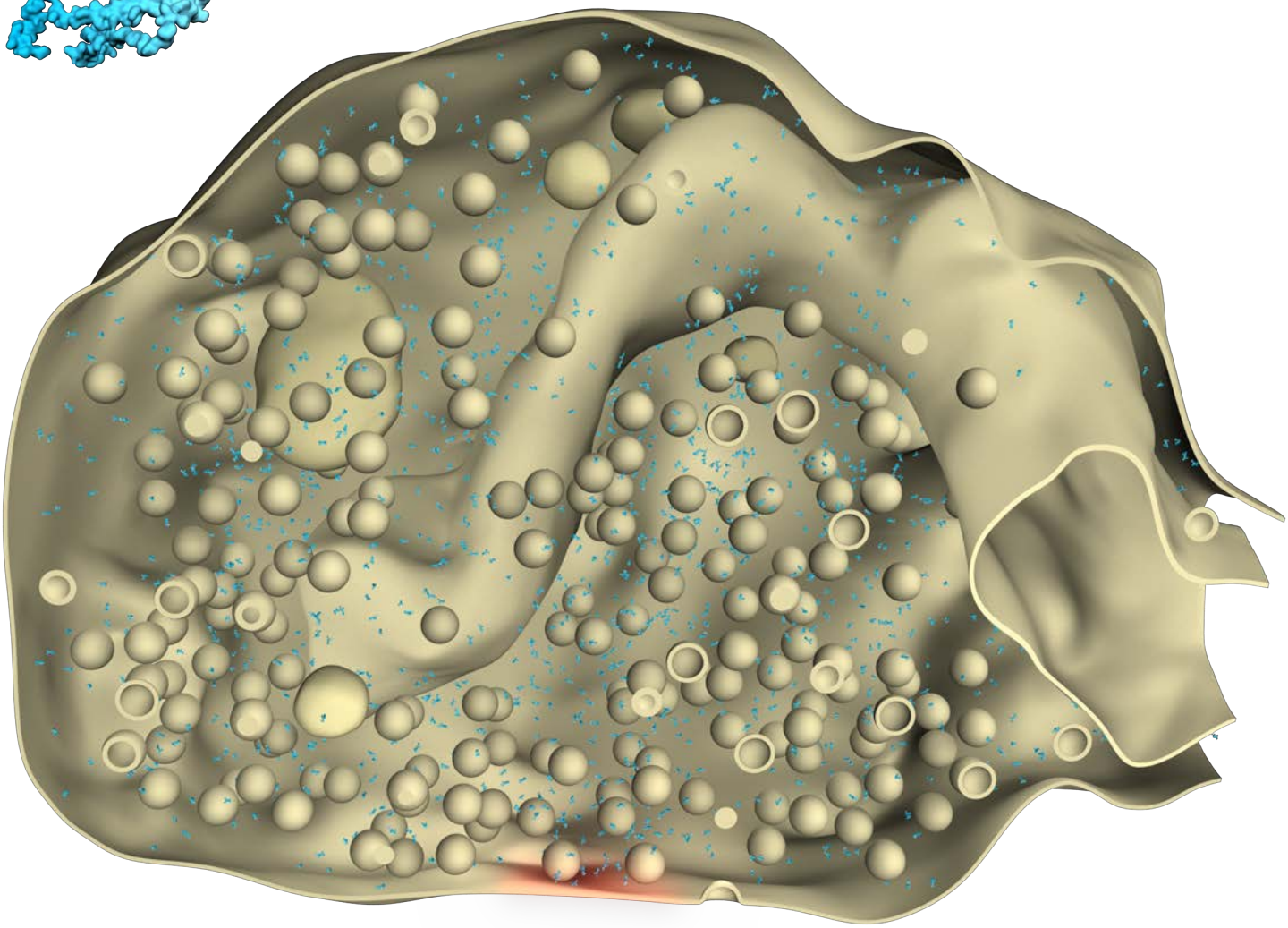
References:

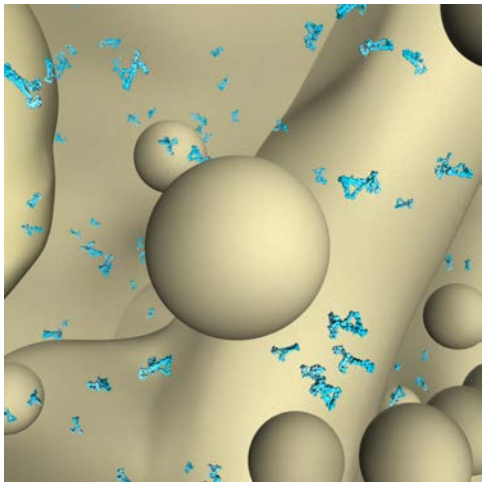
PDB-Identifier (structural information): 1kil.
Chen, X., et al. (2002). Neuron 33, 397-409.
Bracher, A., et al. (2002). J Biol Chem 277, 26517-23.
Denker, A., et al. (2011). Proc Natl Acad Sci U S A 108, 17183-8.
Wragg, R.T., et al. (2013). Neuron 77, 323-34.

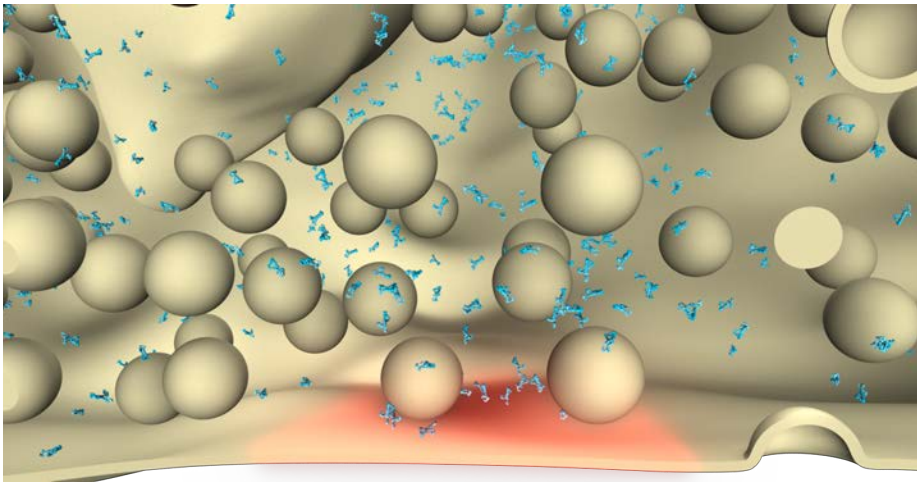
Complexin 1/2

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE co-factor	0.052	2488.2 ± 149.49	16.59





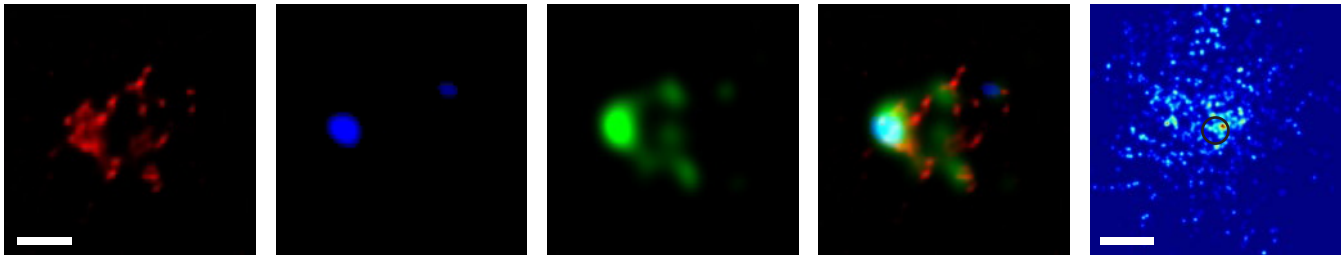




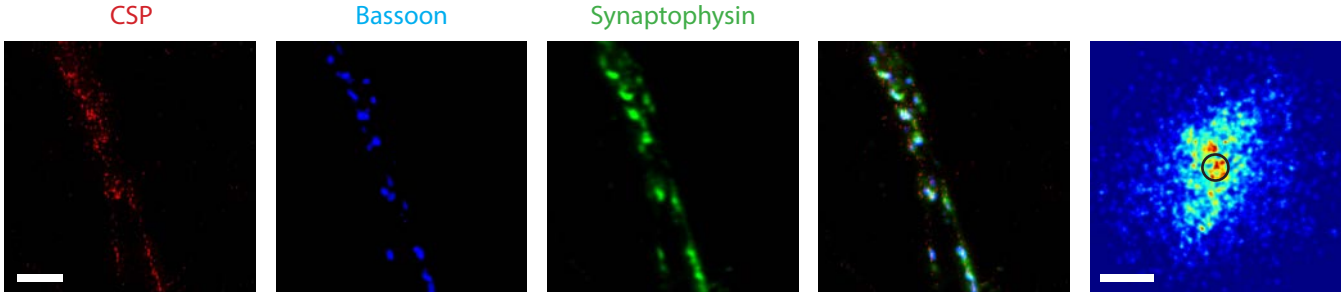
CSP

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE co-factor	0.343	941.18 ± 48.86	6.28

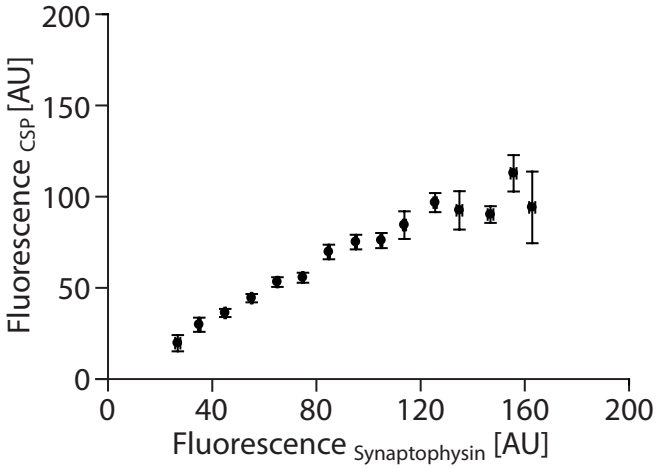
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

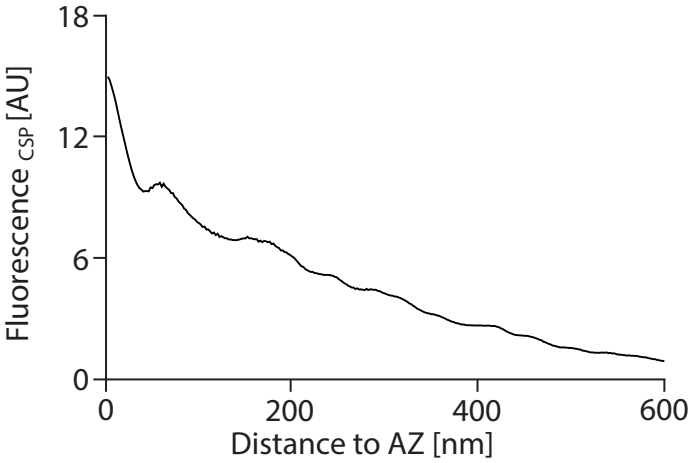


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for CSP):

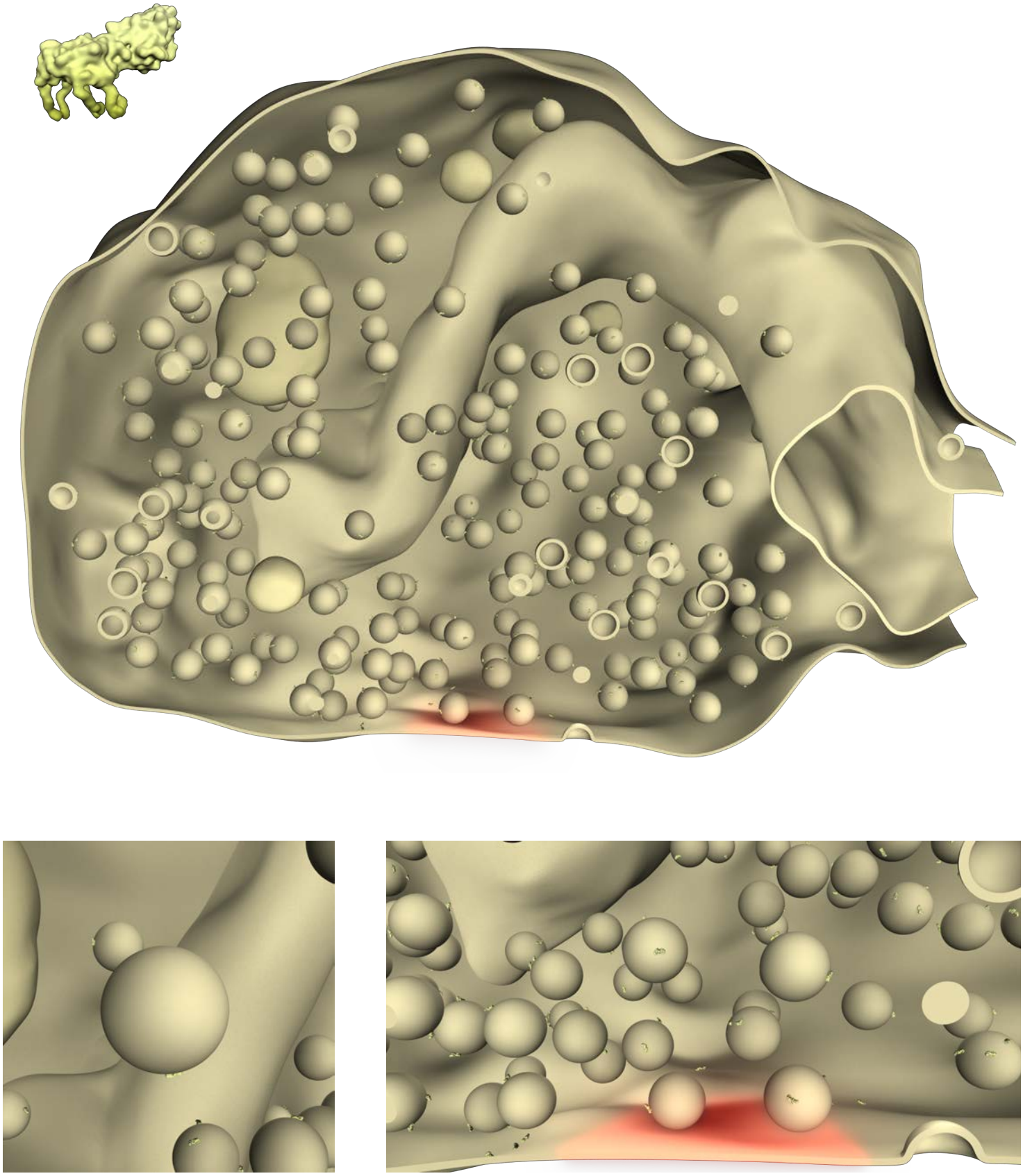
Immunoblots - Synaptic Systems (Göttingen, Germany), 154 003
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 154 003
HC stainings - Synaptic Systems (Göttingen, Germany), 154 003
NMJ stainings - Synaptic Systems (Göttingen, Germany), 154 003

References:

PDB-Identifier (structural information): 1wjz.
Fernandez-Chacon, R., et al. (2004). Neuron 42, 237-51.
Sharma, M., et al. (2011). Nat Cell Biol 13, 30-9.
Sharma, M., et al. (2011). EMBO J 31, 829-41.
Takamori, S., et al. (2006). Cell 127, 831-46.

CSP

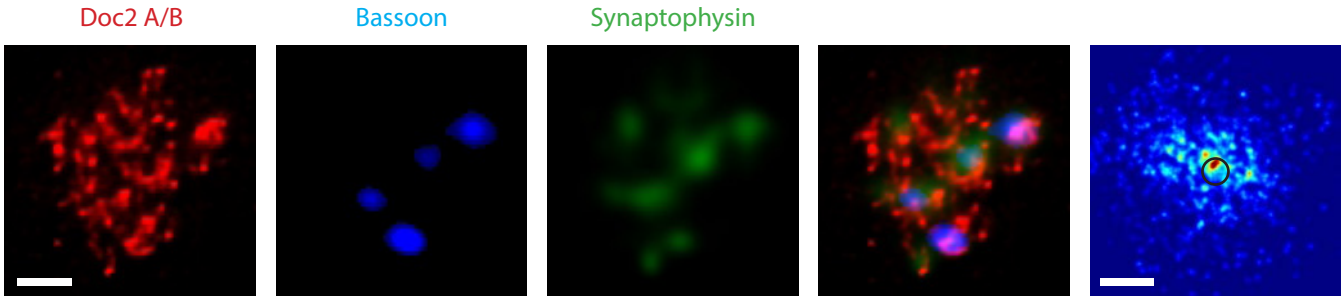
Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE co-factor	0.343	941.18 ± 48.86	6.28



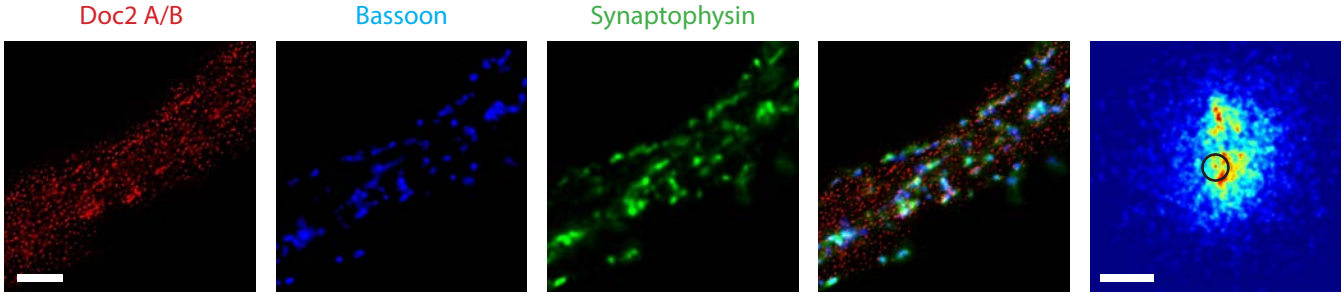
Doc2 A/B

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium sensor	0.276	3696.50 ± 164.19	24.68

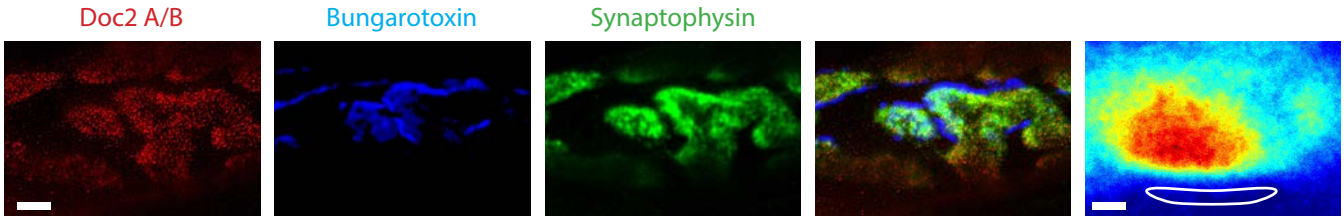
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

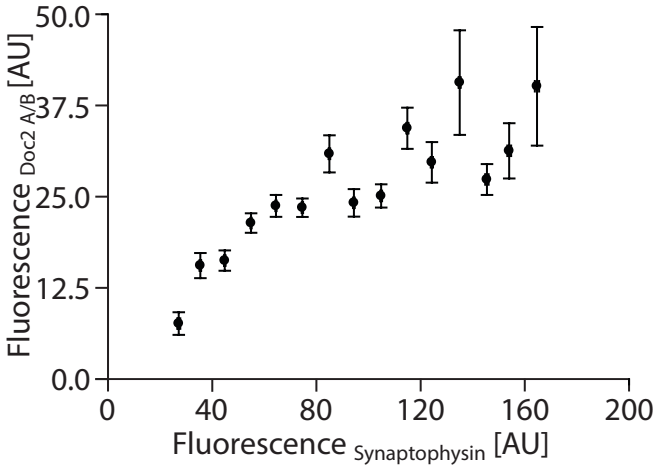


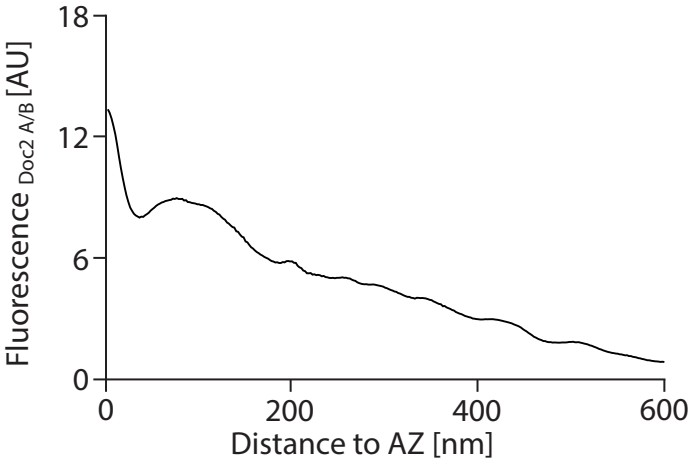
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Doc2 A/B):

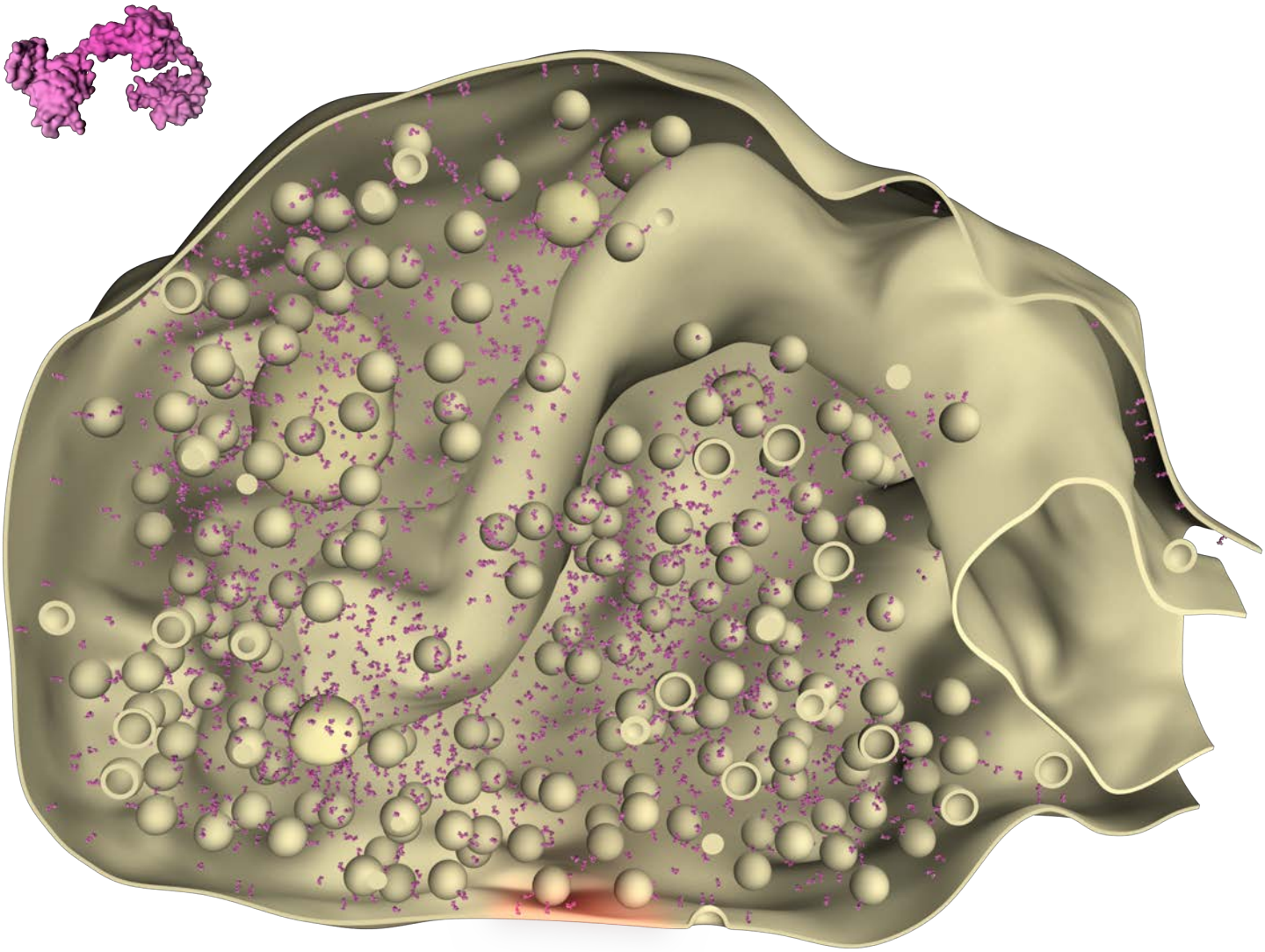
Immunoblots - Synaptic Systems (Göttingen, Germany), 174 203
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 174 203
HC stainings - Synaptic Systems (Göttingen, Germany), 174 203
NMJ stainings - Synaptic Systems (Göttingen, Germany), 174 203

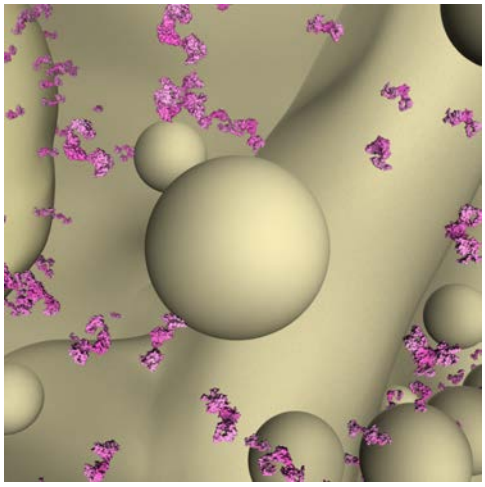
References:

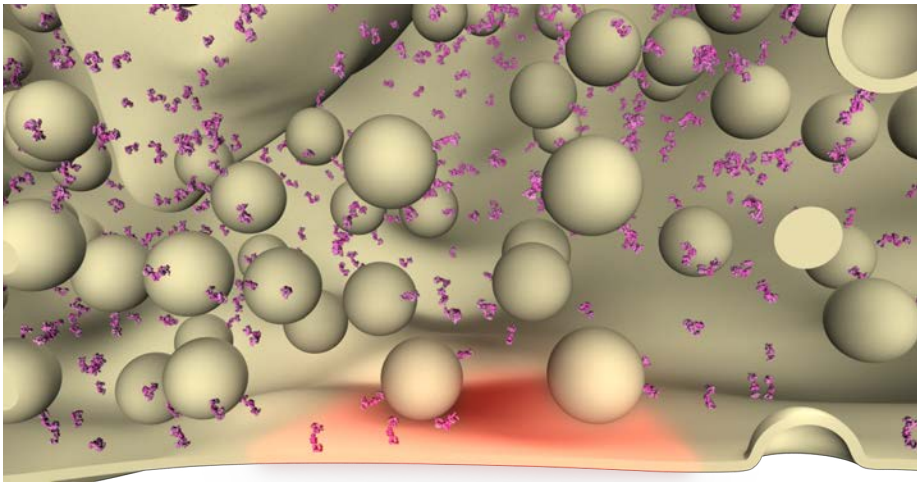
PDB-Identifier (structural information): 1a25.
Groffen, A.J., et al. (2006). J Neurochem 97, 818-33.
Verhage et al. (1997). Neuron 18, 453-61.
Groffen, A.J., et al. (2010). Science 327, 1614-18.
Takamori, S., et al. (2006). Cell 127, 831-46.

Doc2 A/B

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium sensor	0.276	3696.50 ± 164.19	24.68



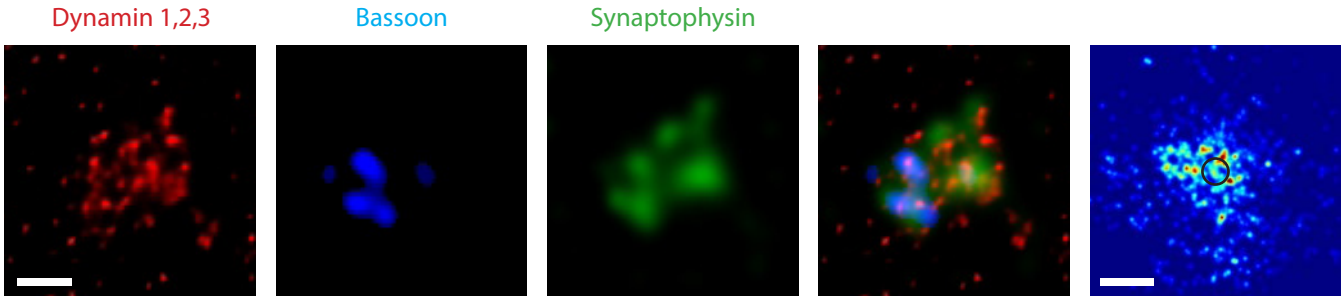




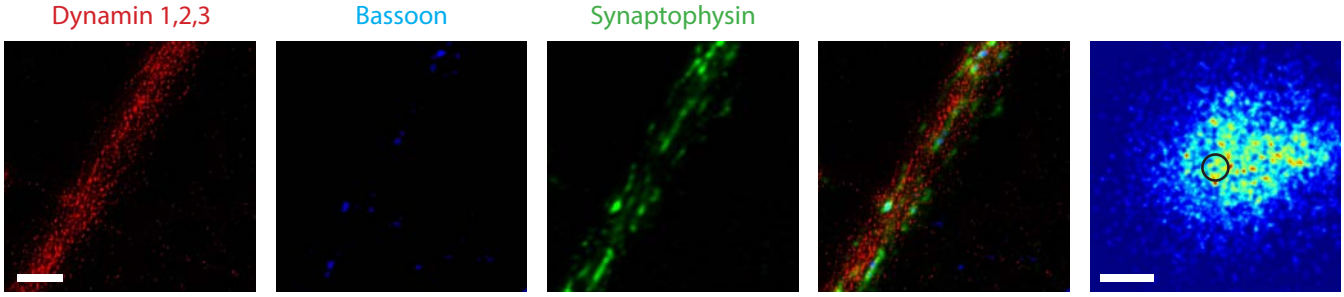
Dynamin 1,2,3

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.373	2326.40 ± 83.87	15.53

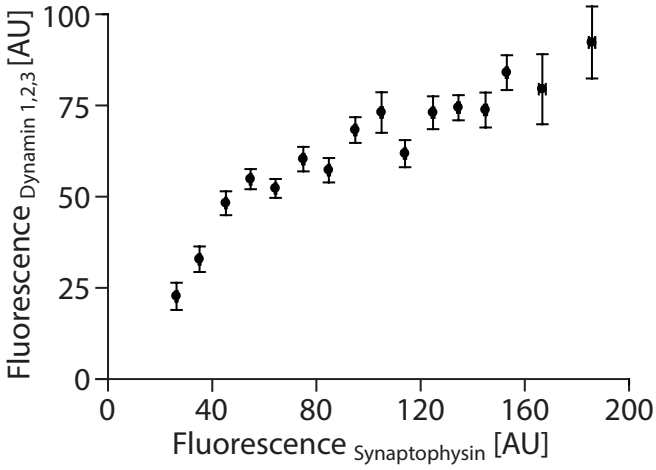
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

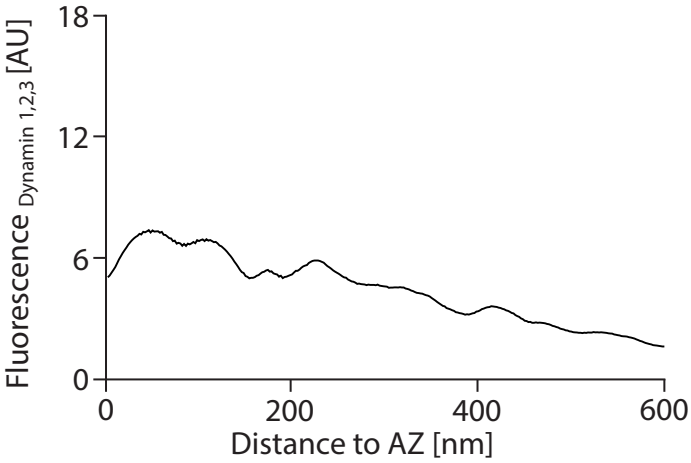


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Dynamin 1,2,3):

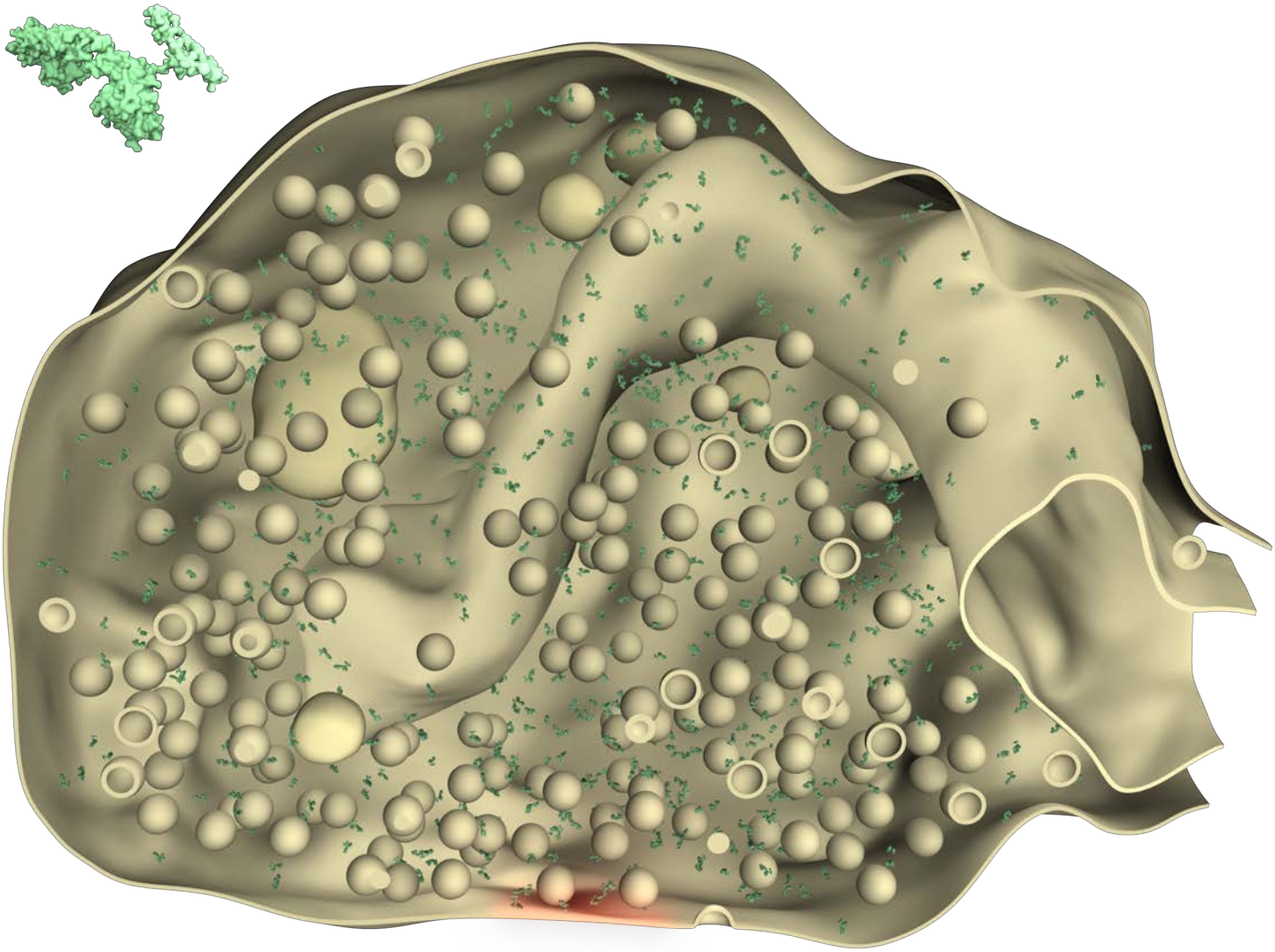
Immunoblots - Synaptic Systems (Göttingen, Germany), 115 002
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 115 002
HC stainings - BD Biosciences (Heidelberg, Germany), 610245
NMJ stainings - Abnova (Taipei City, Taiwan), PAB9596

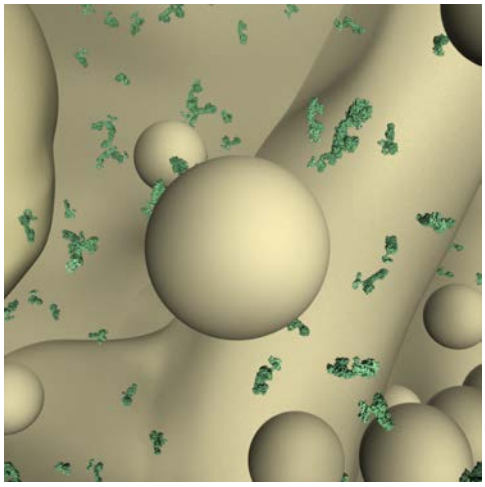
References:

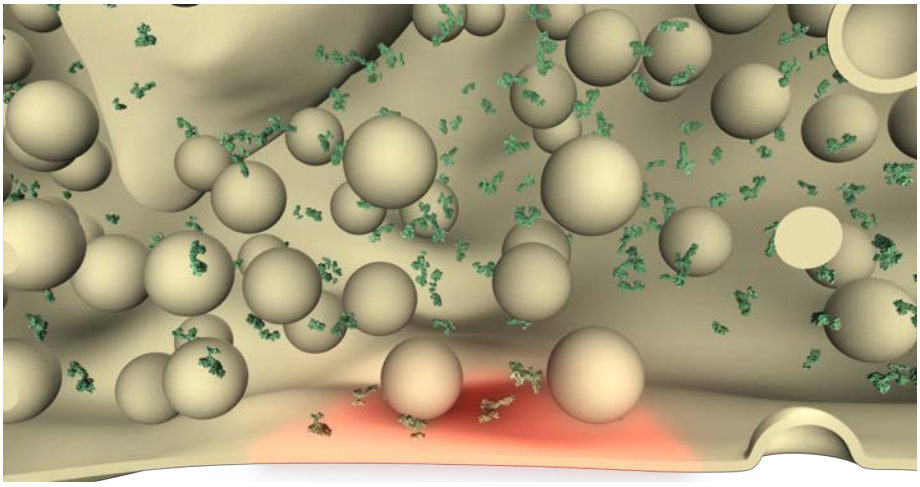
PDB-Identifier (structural information): 3zvr.
Ferguson, S.M., and De Camili, P. (2012). Nat Rev Mol Cell Biol 13, 75-88.
Roux, A., et al. (2006). Nature 441, 528-31.
Koenig, J.H., and Ikeda, K. (1989). J Neurosci 9, 3844-60.
Takamori, S., et al. (2006). Cell 127, 831-46.

Dynamin 1,2,3

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.373	2326.40 ± 83.87	15.53



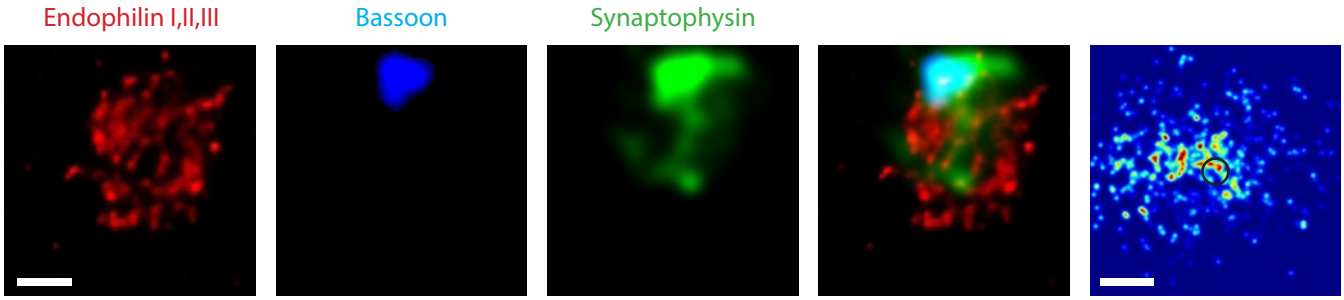




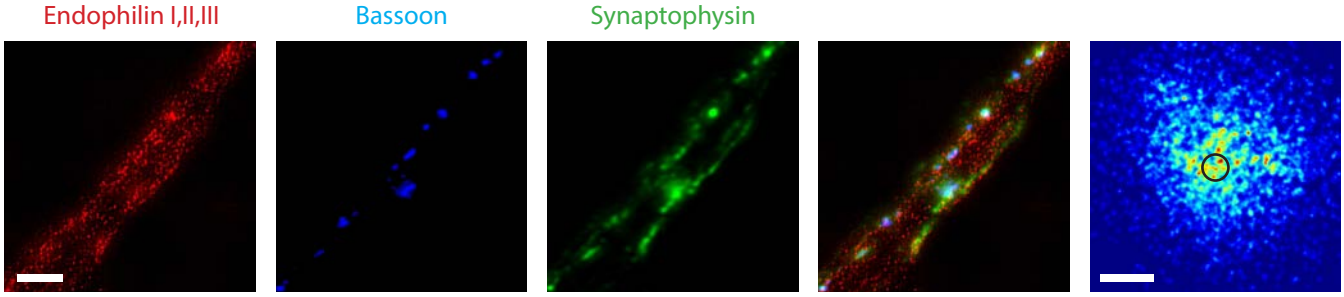
Endophilin I,II,III

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.167	2524.40 ± 67.27	16.86

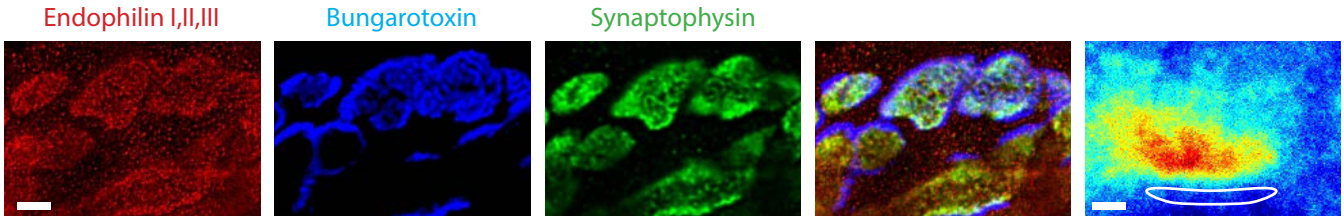
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

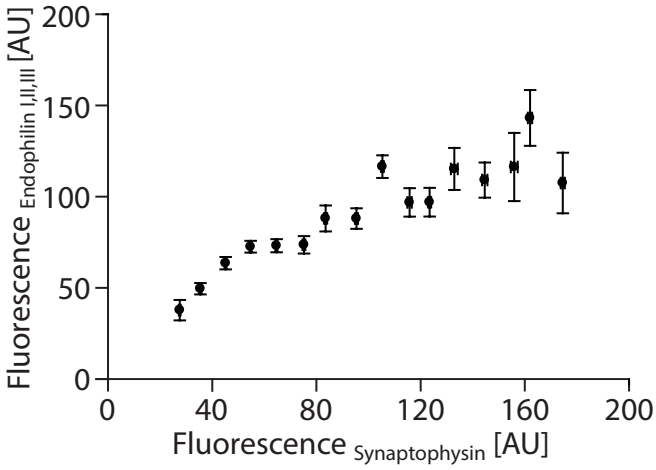


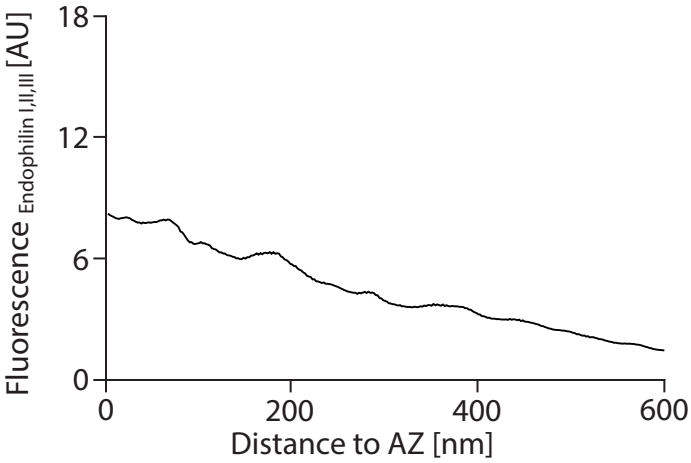
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Endophilin I,II,III):

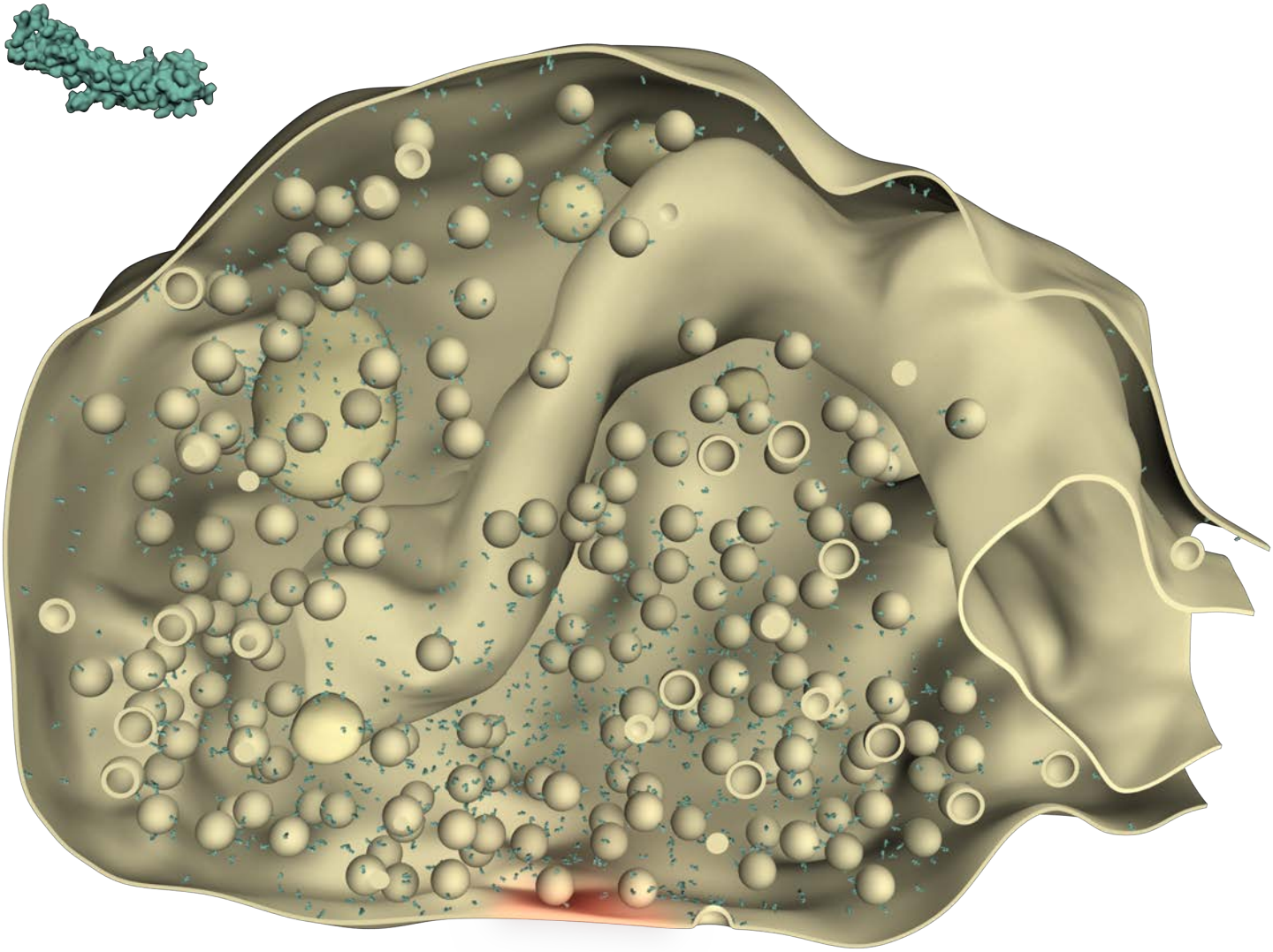
Immunoblots - Santa Cruz (Heidelberg, Germany), sc-46702
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 159 002
HC stainings - Synaptic Systems (Göttingen, Germany), 159 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 159 002

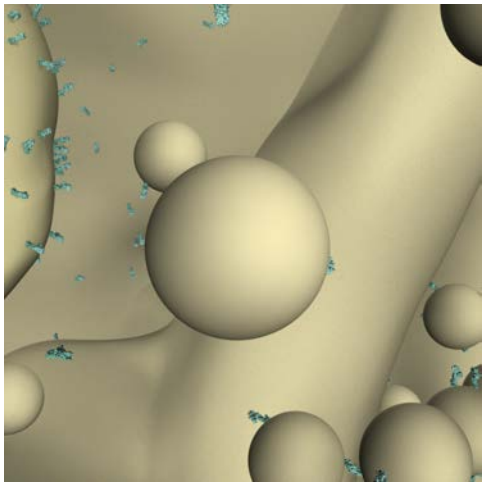
References:

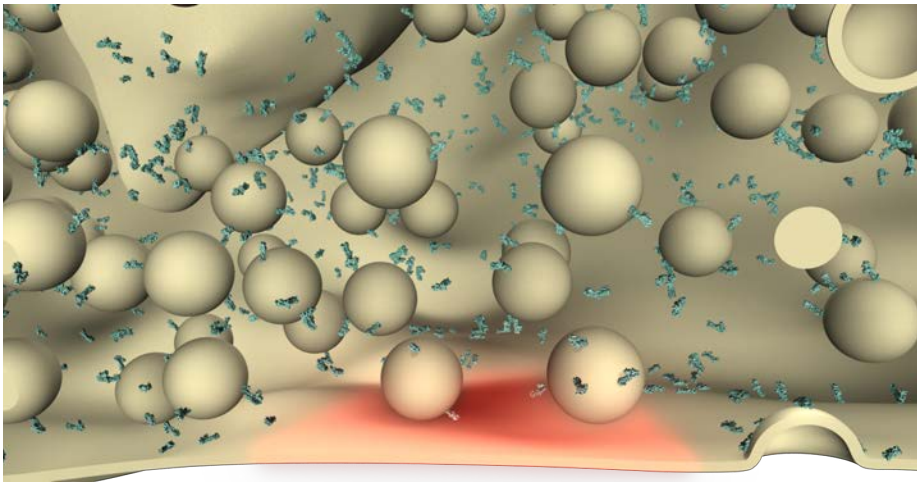
PDB-Identifier (structural information): 1x03, 3iql.
Schuske, K.R., et al. (2003). Nauron 40, 749-62.
Sundborger, A., et al. (2011). J Cell Sci 124, 133-43.
Kjaerulff, O., et al. (2010). Cell Biochem Biophys 60, 137-54.

Endophilin I,II,III

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.167	2524.40 ± 67.27	16.86



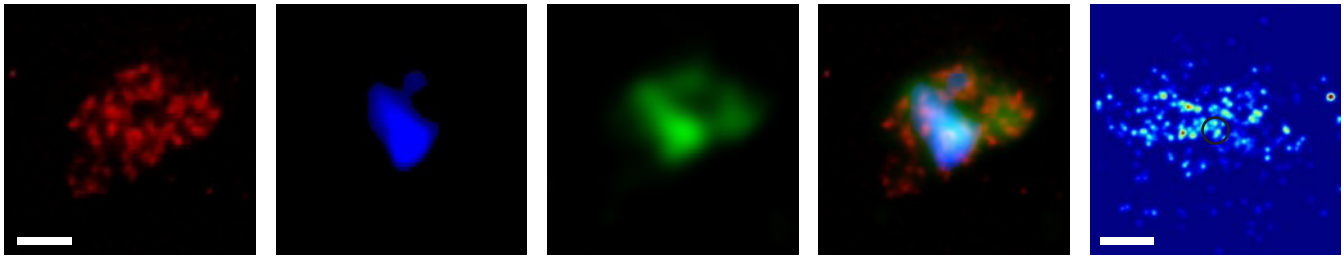




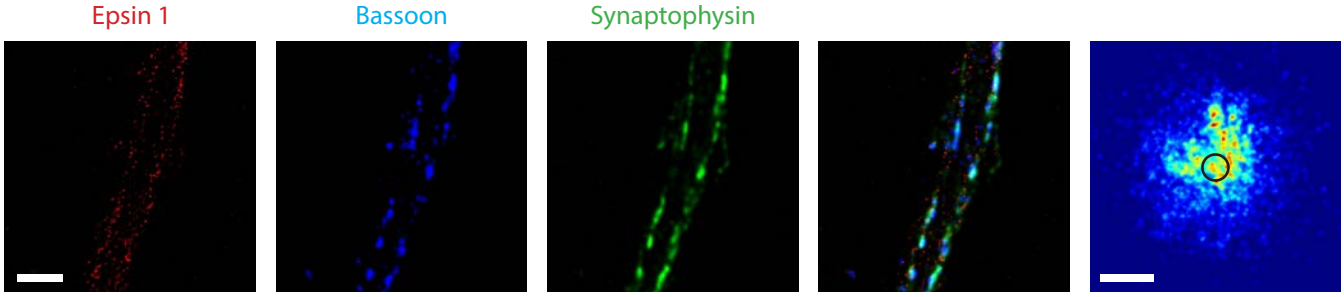
Epsin 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.0046	92.88 ± 4.30	0.62

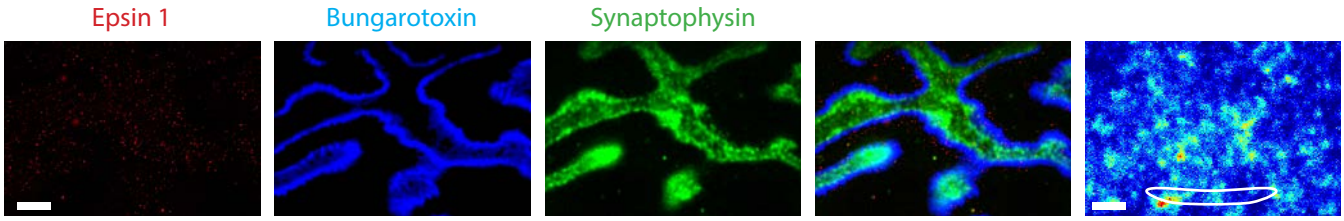
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

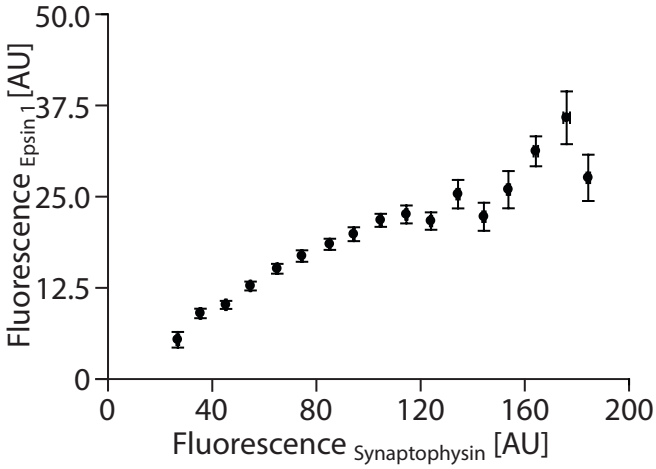


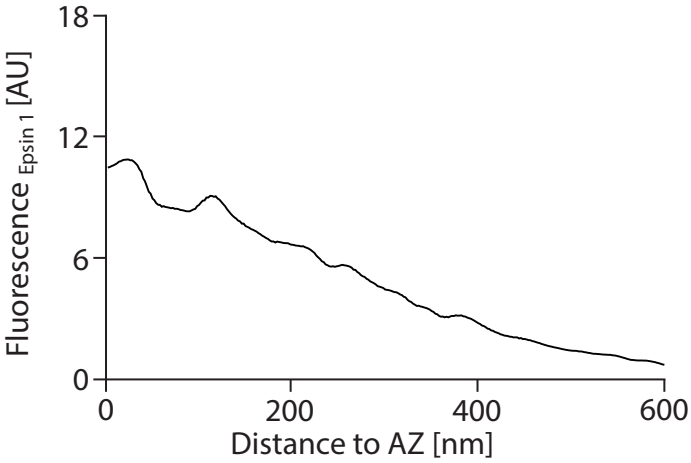
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Epsin 1):

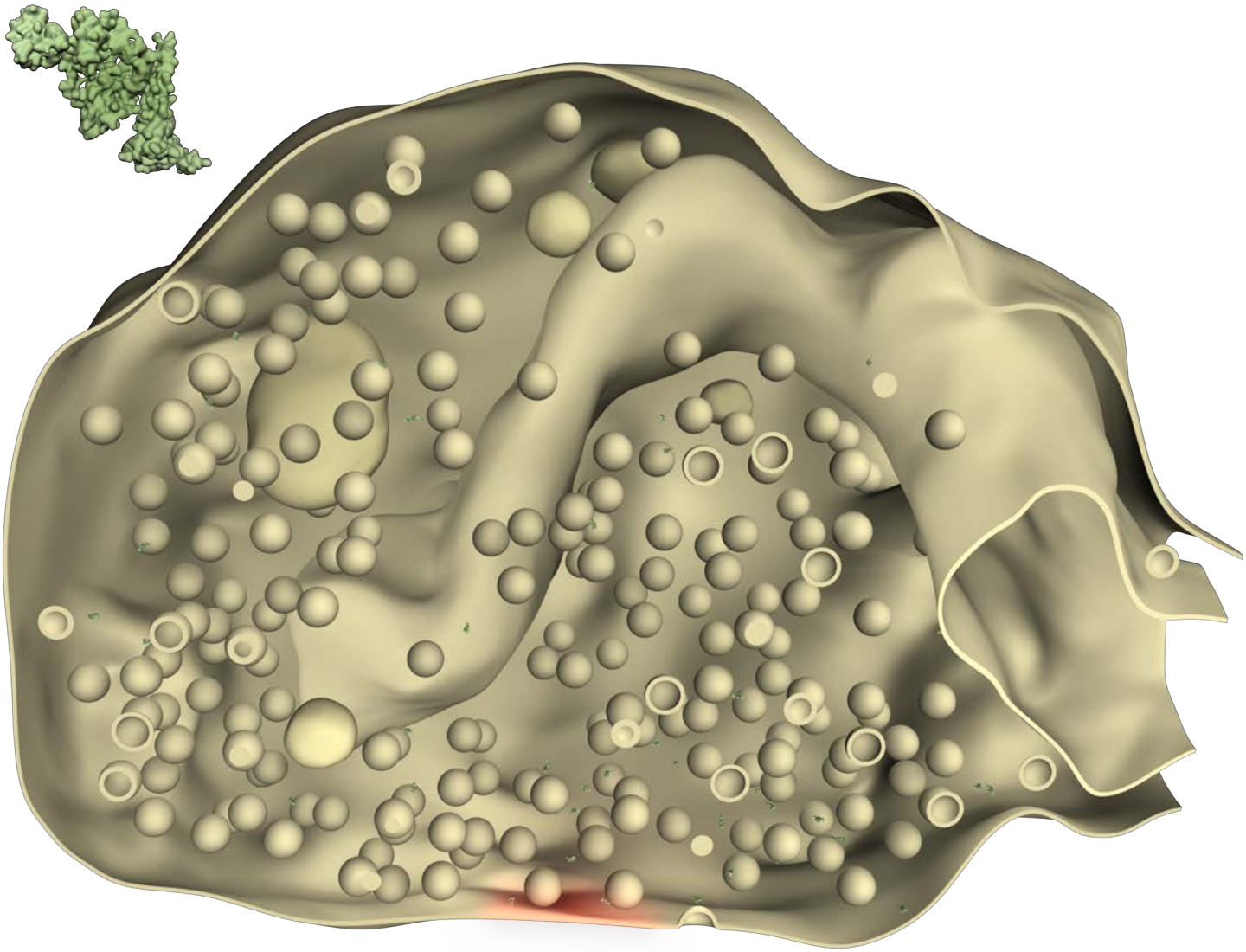
Immunoblots - Abcam (Cambridge, England), ab82688
Slice/synaptosome stainings - Novus Biologicals (Littleton, Colorado, USA), NBP1-40602
HC stainings - Novus Biologicals (Littleton, Colorado, USA), NBP1-40602
NMJ stainings - Novus Biologicals (Littleton, Colorado, USA), NBP1-40602

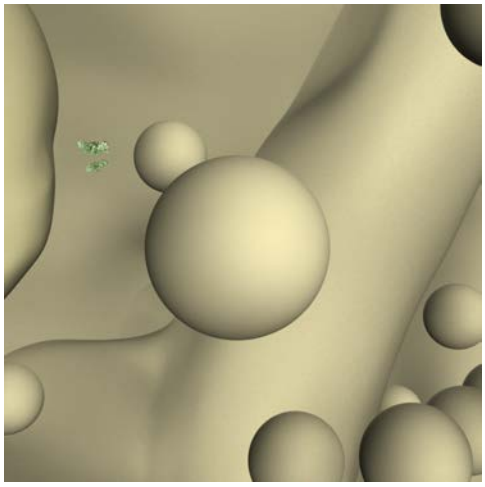
References:

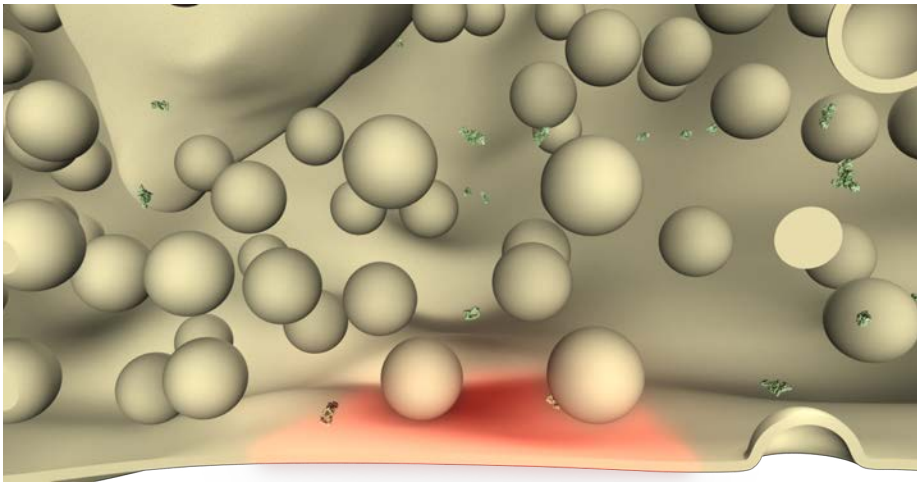
PDB-Identifier (structural information): 1edu, 1iq3, 1yx5.
Horvath, C.A., et al. (2007). Int J Biochem Cell Biol 39, 1765-70.
Ford, M.G., et al. (2002). Nature 419, 361-6.

Epsin 1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.0046	92.88 ± 4.30	0.62



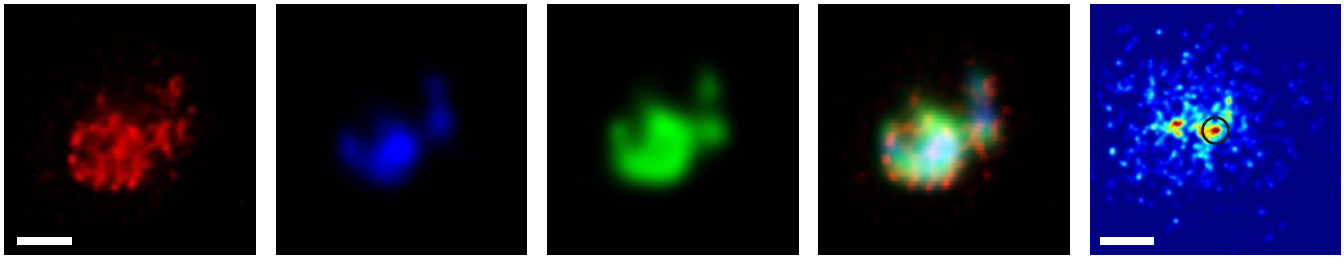




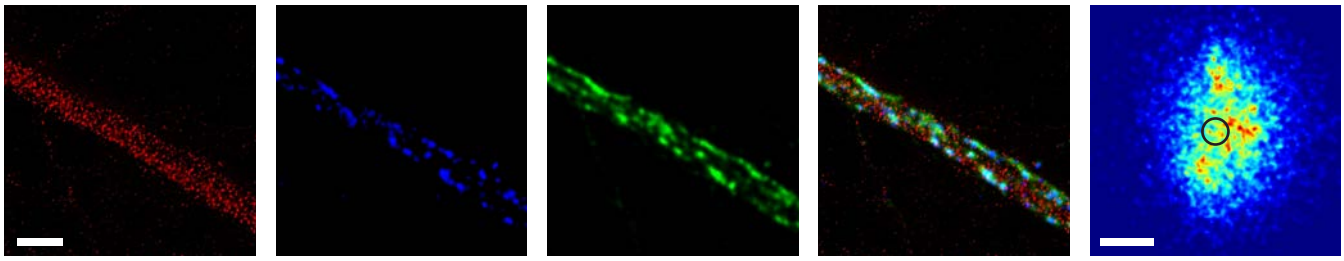
Hsc70

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.960	8210.10 ± 404.50	54.82

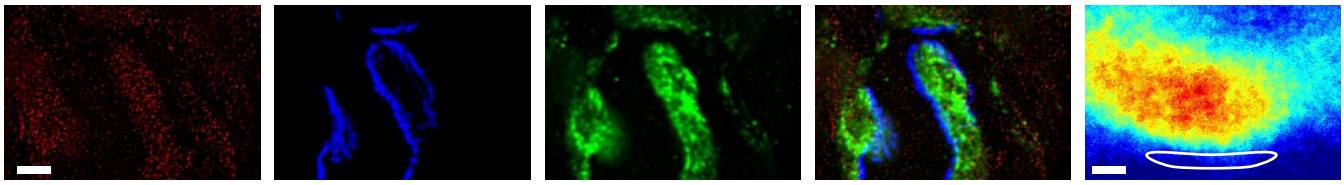
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

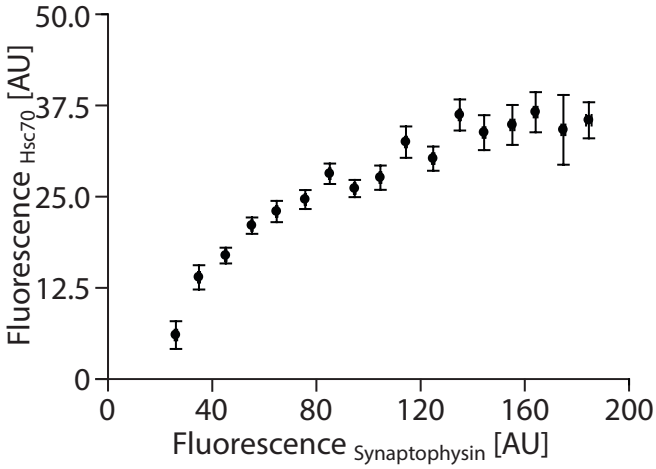


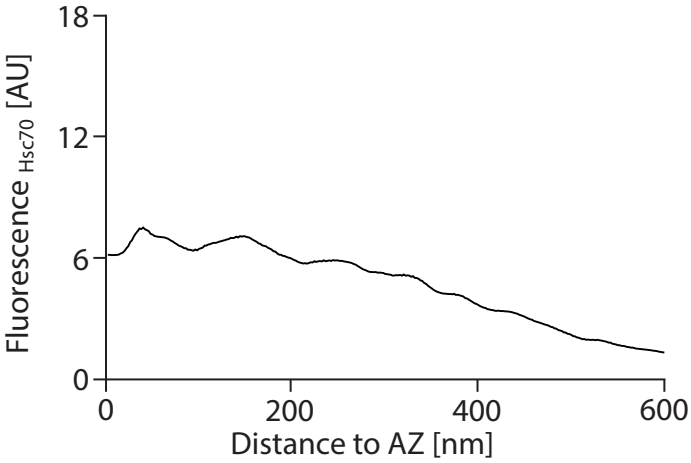
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Hsc70):

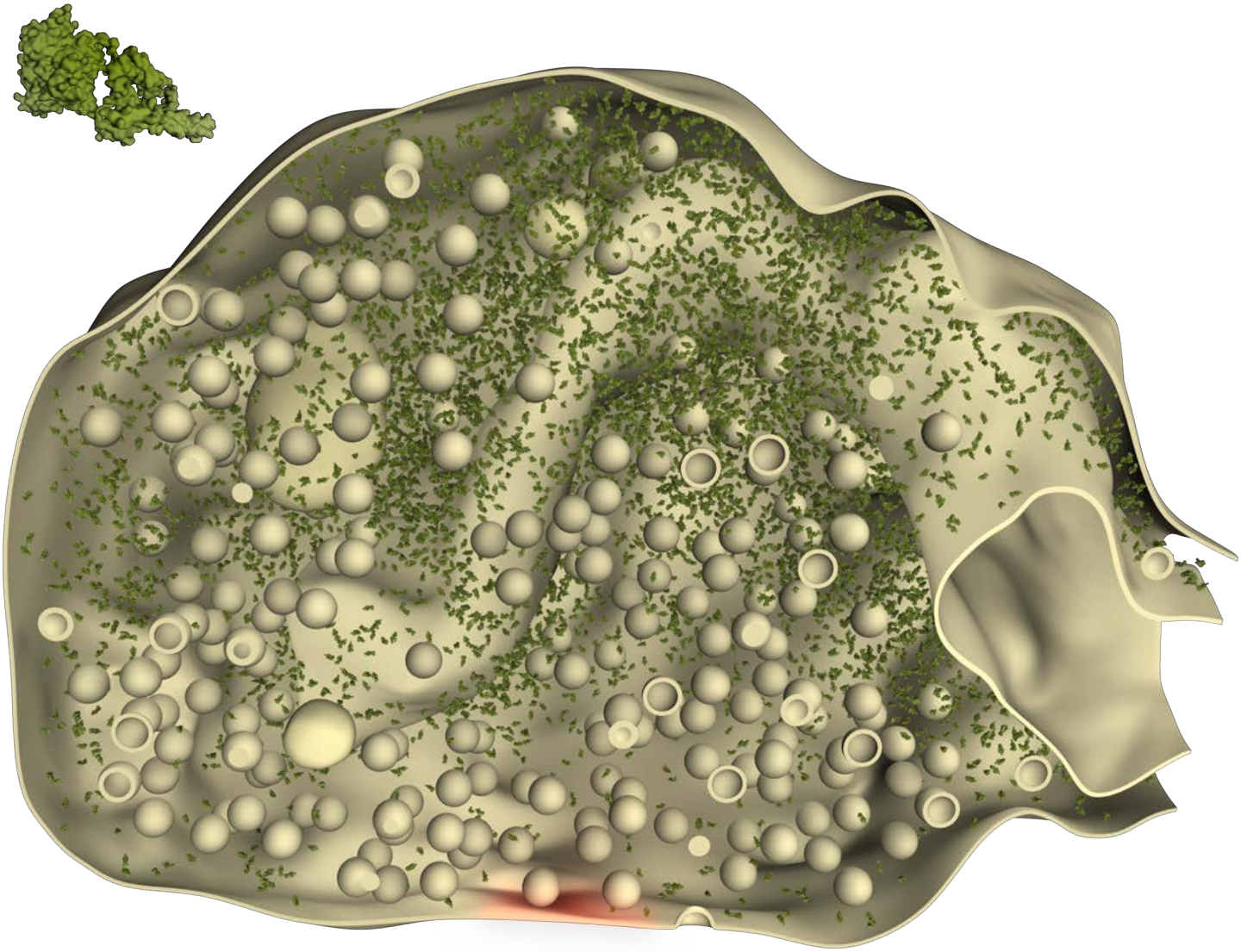
Immunoblots - Synaptic Systems (Göttingen, Germany), 149 011
Slice/synaptosome stainings - Santa Cruz (Heidelberg, Germany), sc-7298
HC stainings - Santa Cruz (Heidelberg, Germany), sc-7298
NMJ stainings - Santa Cruz (Heidelberg, Germany), sc-7298

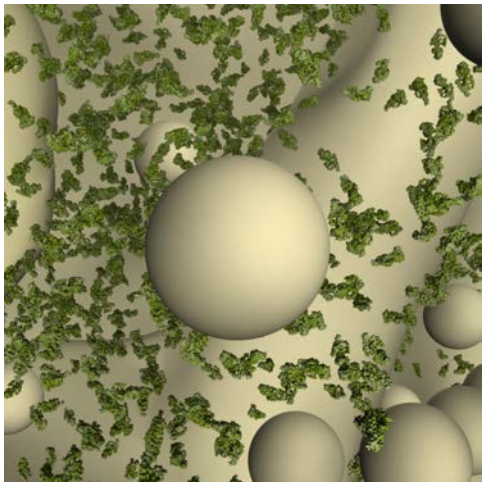
References:

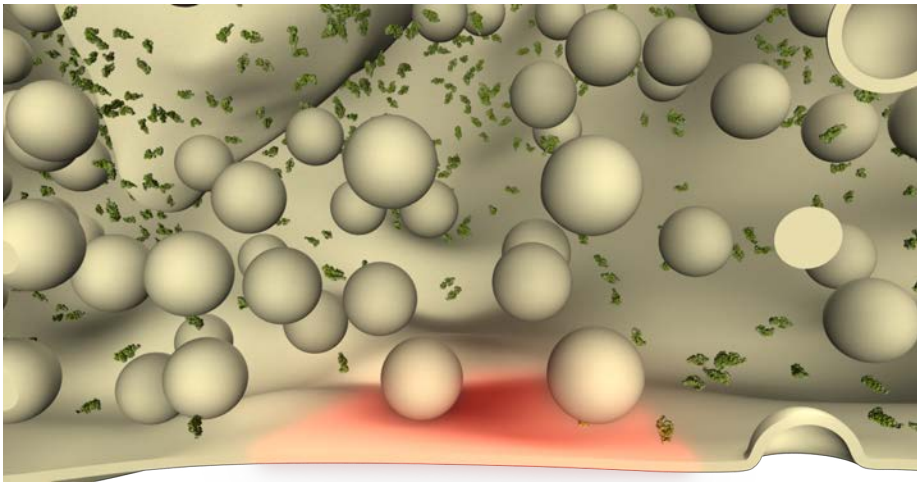
PDB-Identifier (structural information): 2v7z, 1ud0.
Schlossman, D.M., et al. (1984). J Cell Biol 99, 723-33.
Rothnie, A., et al. (2011). Proc Natl Acad Sci U S A 108, 6927-32.
Cremona, O., et al. (1999). Cell 99, 179-88.

Hsc70

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.960	8210.10 ± 404.50	54.82



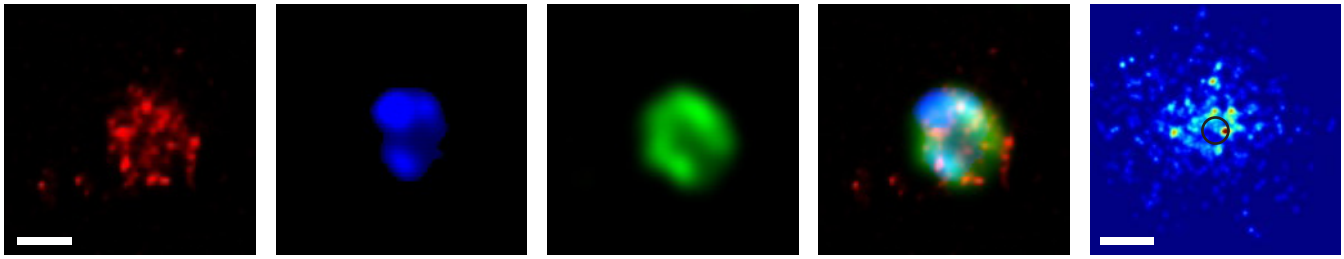




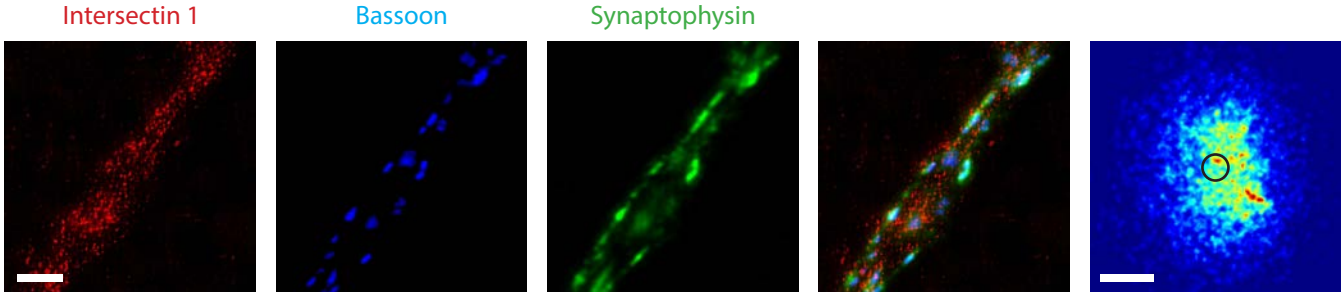
Intersectin 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.701	3096.50 ± 277.62	20.68

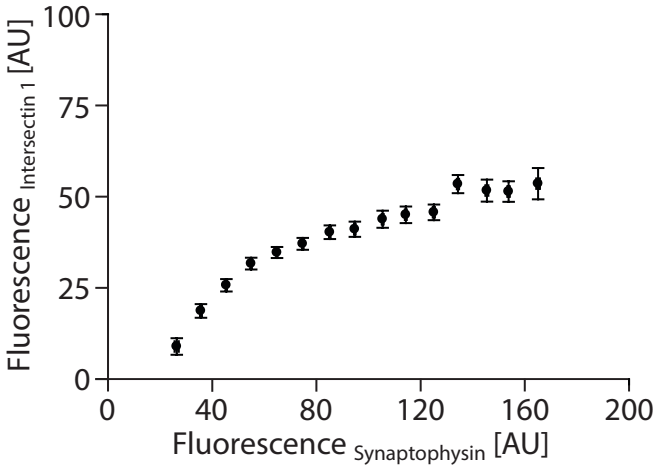
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

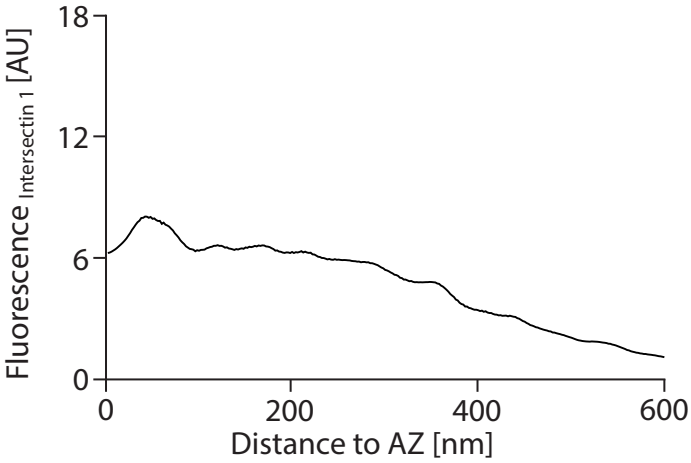


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Intersectin 1):

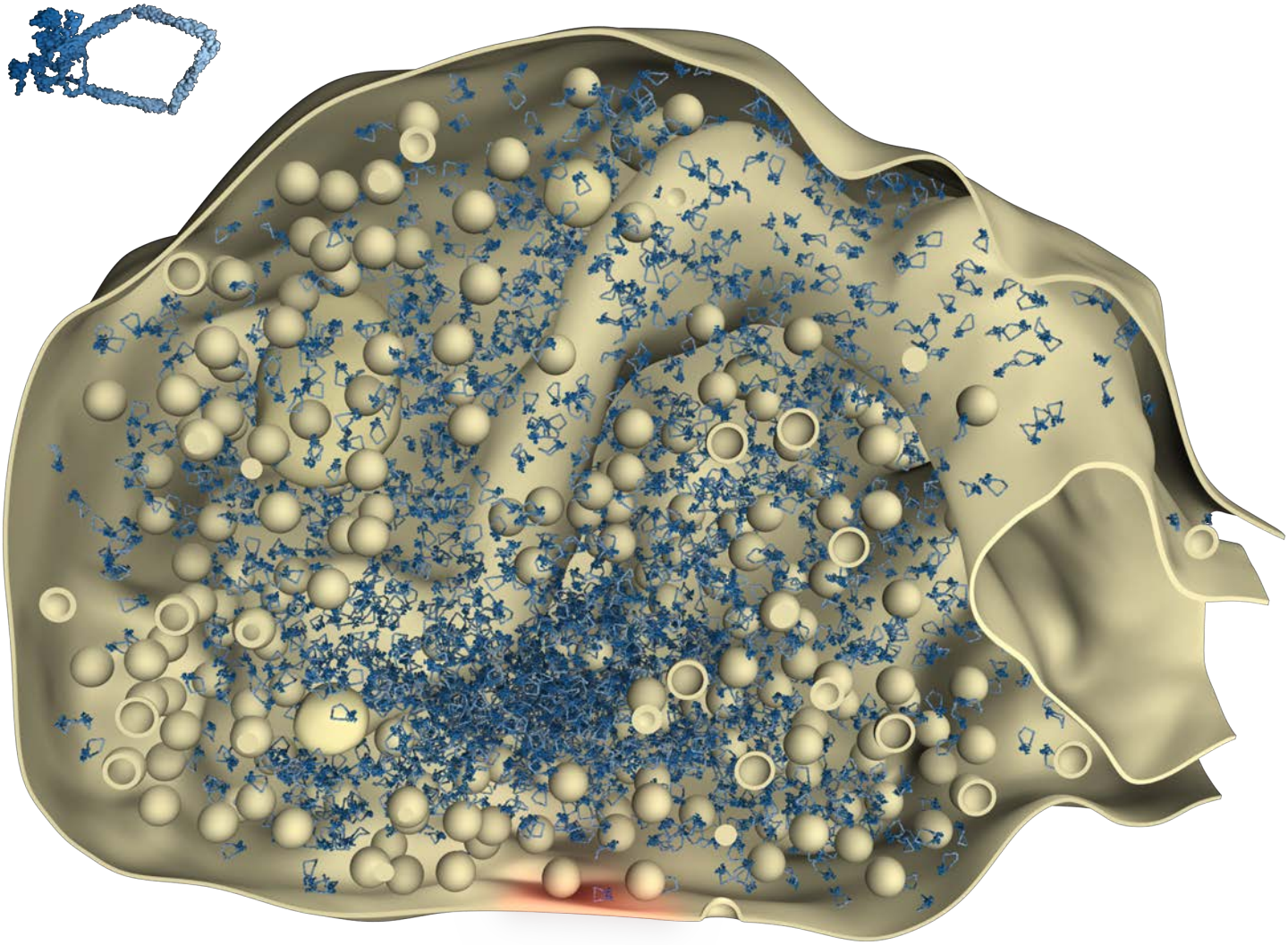
Immunoblots - Volker Haucke (FMP, Berlin, Germany)
Slice/synaptosome stainings - Volker Haucke (FMP, Berlin, Germany)
HC stainings - Volker Haucke (FMP, Berlin, Germany)
NMJ stainings - Volker Haucke (FMP, Berlin, Germany)

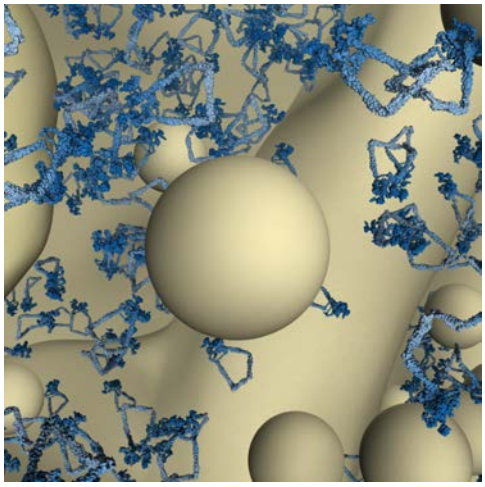
References:

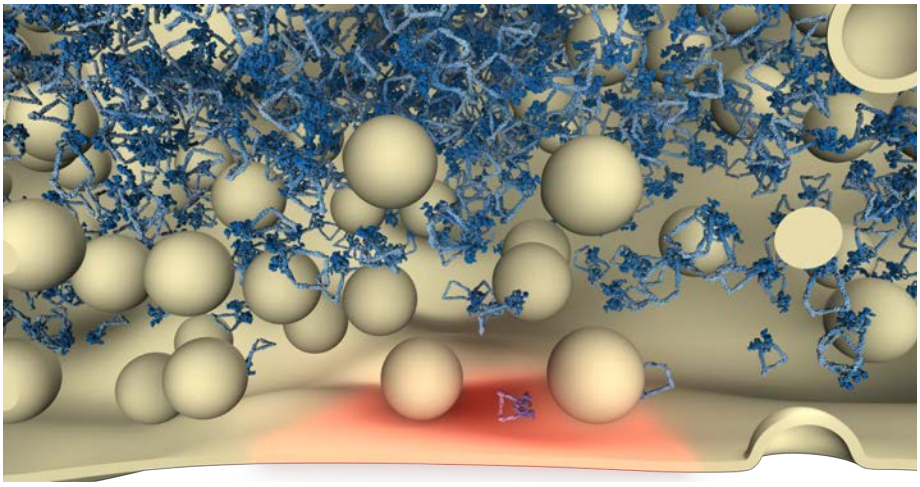
PDB-Identifier (structural information): 3jv3, 3fia, 2kgr.
Pechstein, A., et al. (2010a). Proc Natl Acad Sci U S A 107, 4206-11.
Pechstein, A., et al. (2010b). Biochem Soc Trans 38, 181-6.

Intersectin 1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.701	3096.50 ± 227.62	20.68



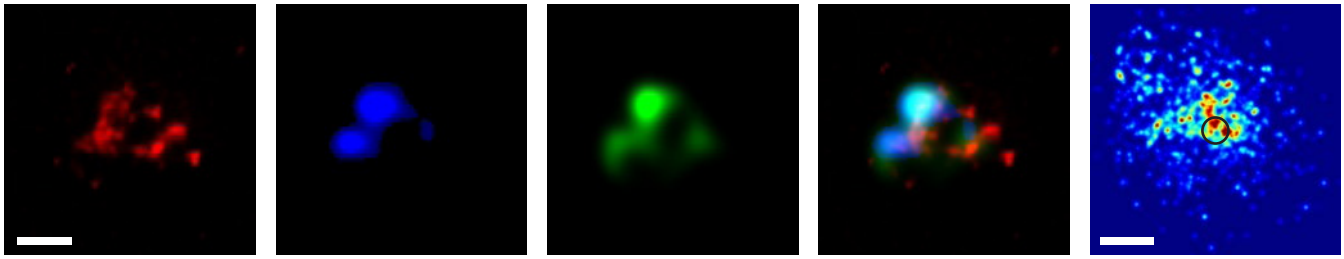




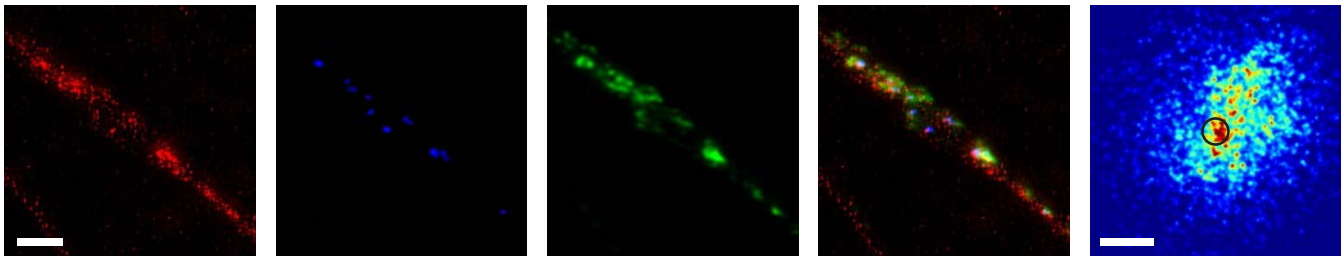
Munc13a

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE co-factor	0.503	1551.30 ± 53.18	10.36

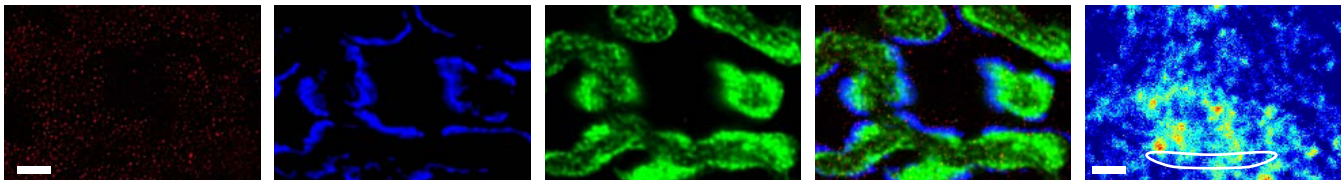
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

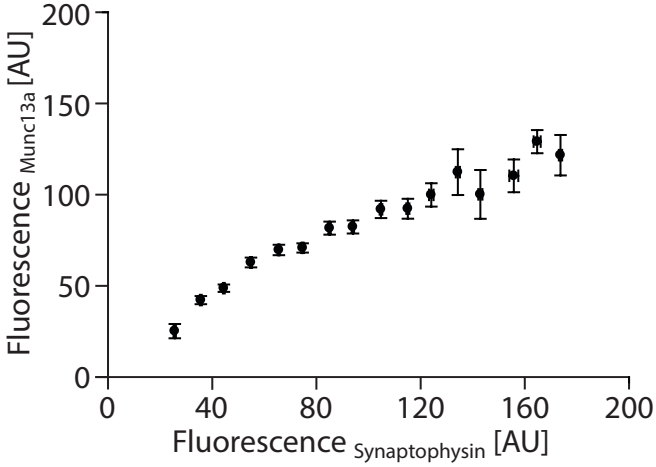


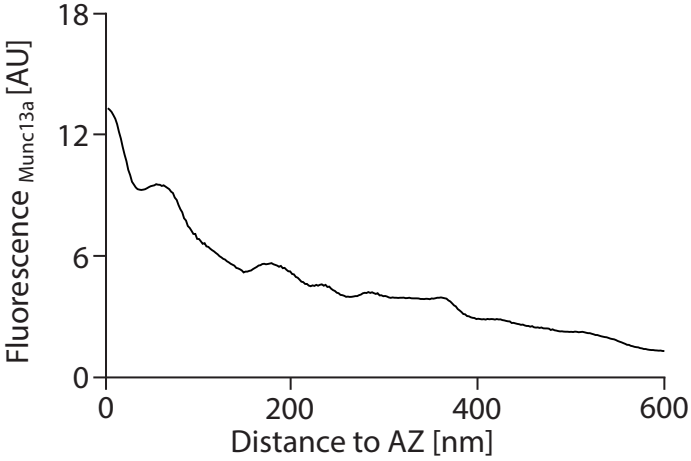
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Munc13a):

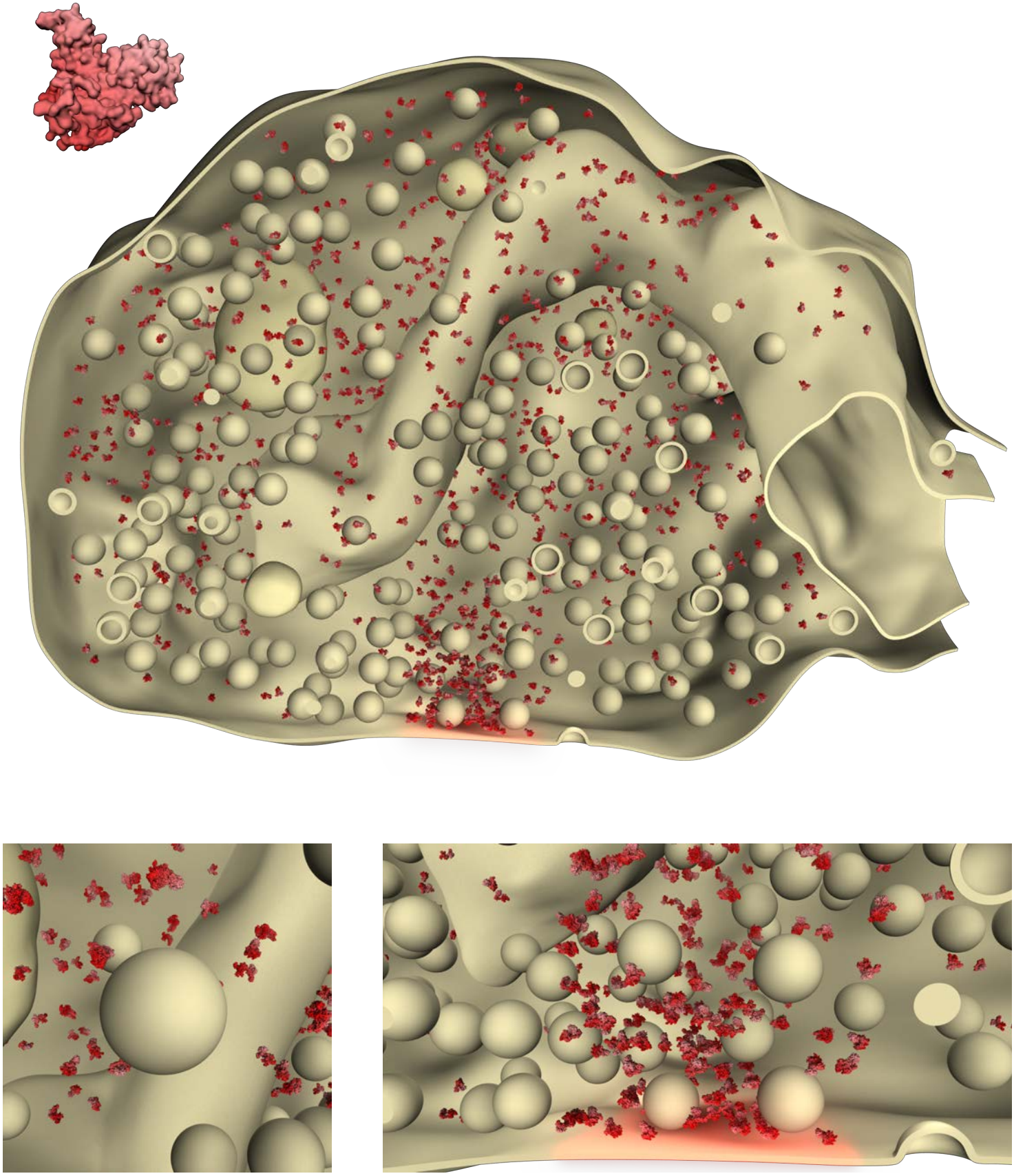
Immunoblots - Antibodies-Online (Aachen, Germany), ABIN571921
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 126 103
HC stainings - Antibodies-Online (Aachen, Germany), ABIN571921
NMJ stainings - Synaptic Systems (Göttingen, Germany), 126 103

References:

PDB-Identifier (structural information): 2cjs, 2kdu, 1y8f, 3kwu, 3swh.
Deng, L., et al. (2011). Neuron 69, 317-31.
Betz, A., et al. (1997). J Biol Chem 272, 2520-6.
Varoqueaux, F., et al. (2002). Proc Natl Acad Sci U S A 99, 9037-42.

Munc13a

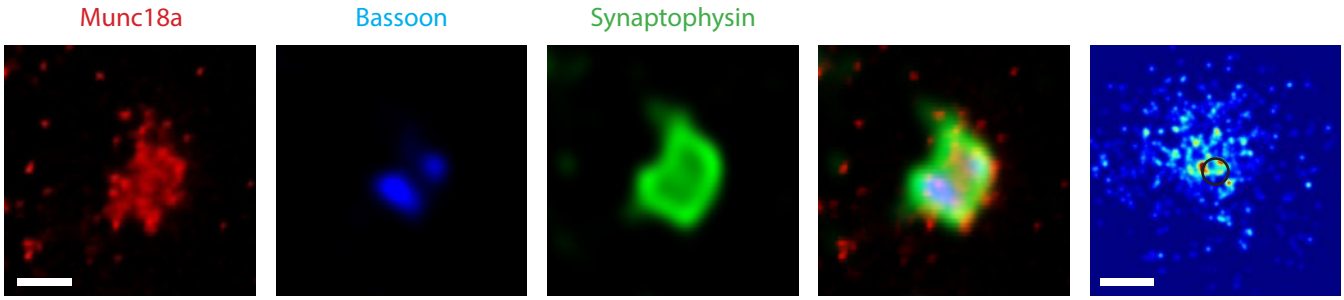
Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE co-factor	0.503	1551.30 ± 53.18	10.36



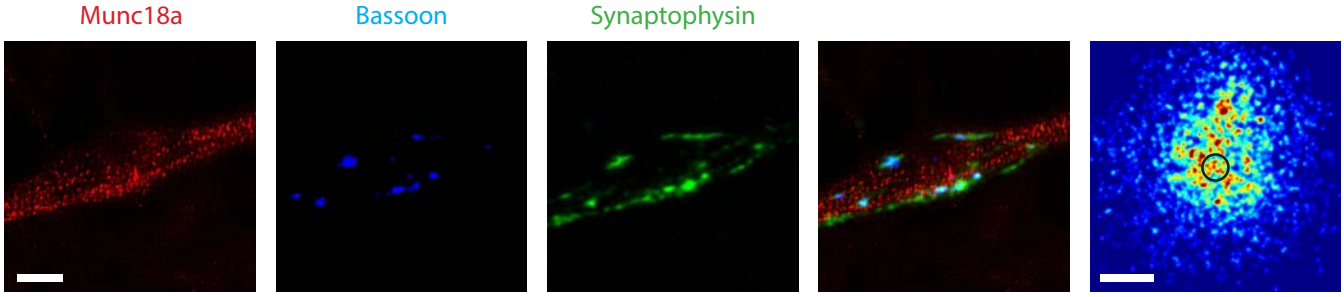
Munc18a

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE co-factor	0.474	4253.40 ± 207.07	28.40

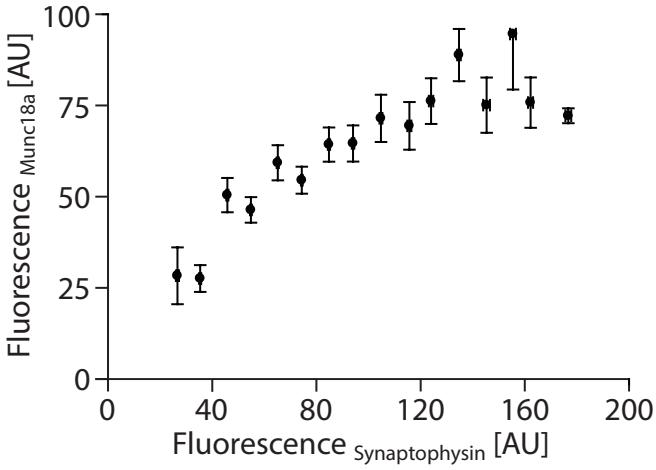
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

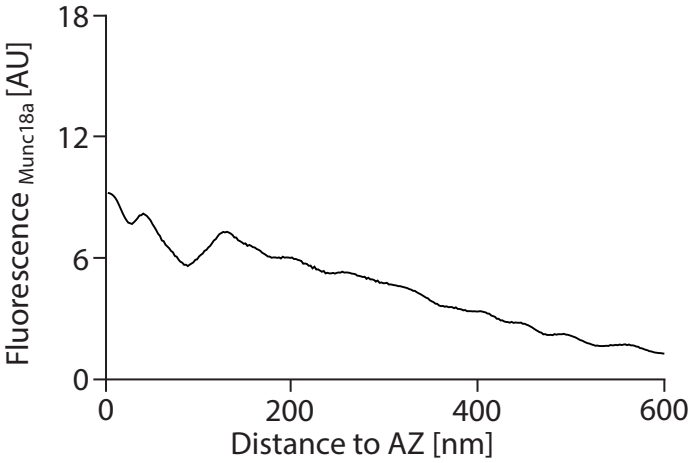


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Munc18a):

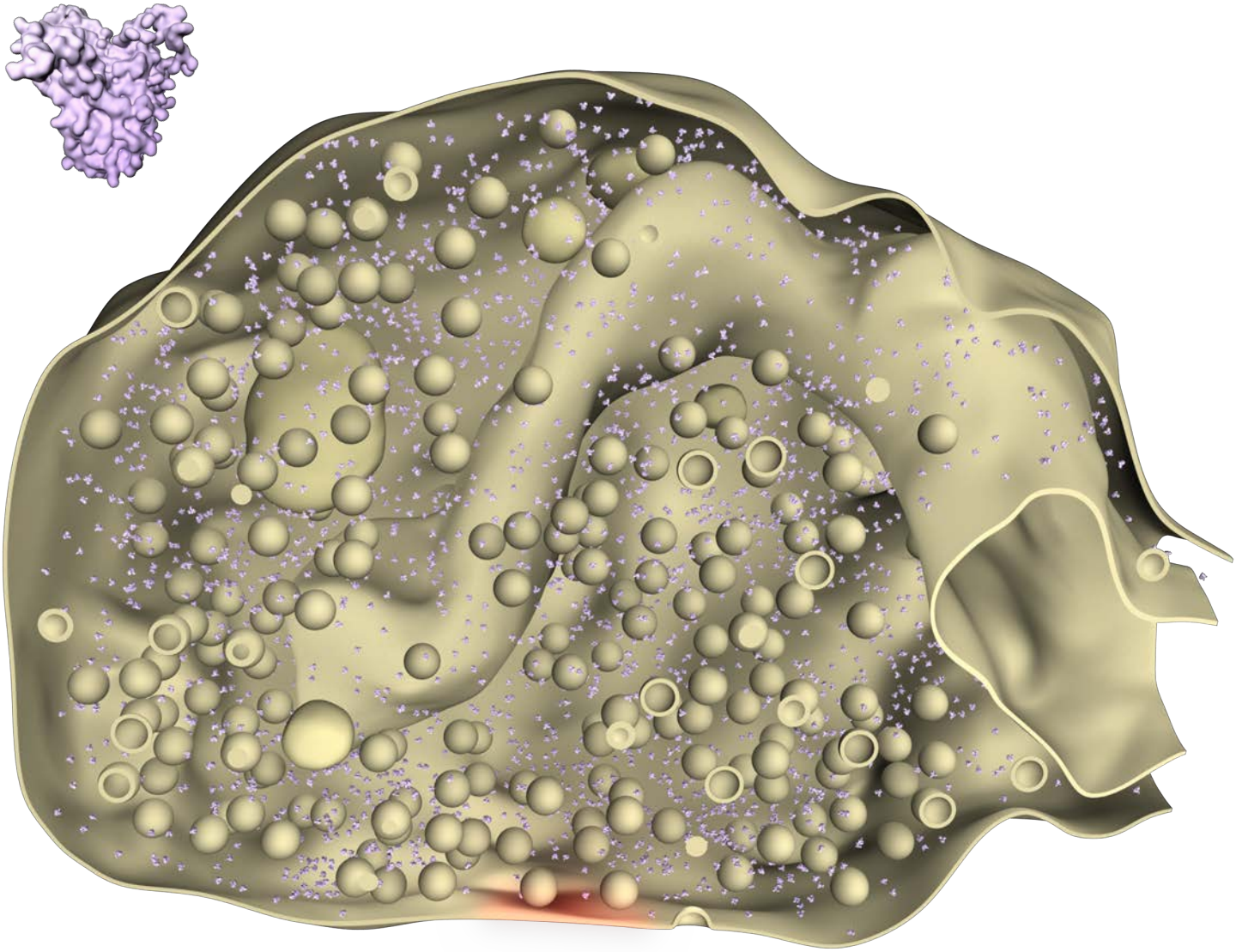
Immunoblots - Synaptic Systems (Göttingen, Germany), 116 003
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 116 003
HC stainings - BD Biosciences (Heidelberg, Germany), 610336
NMJ stainings - BD Biosciences (Heidelberg, Germany), 610336

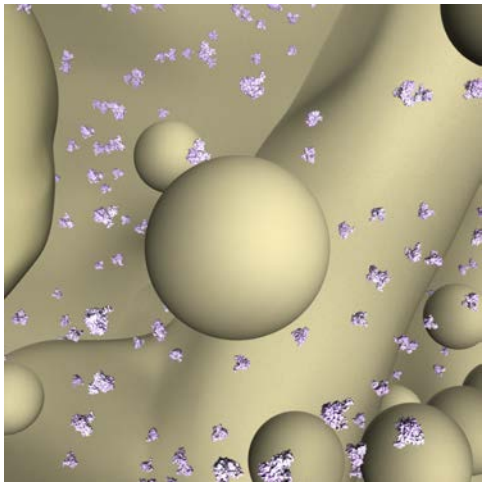
References:

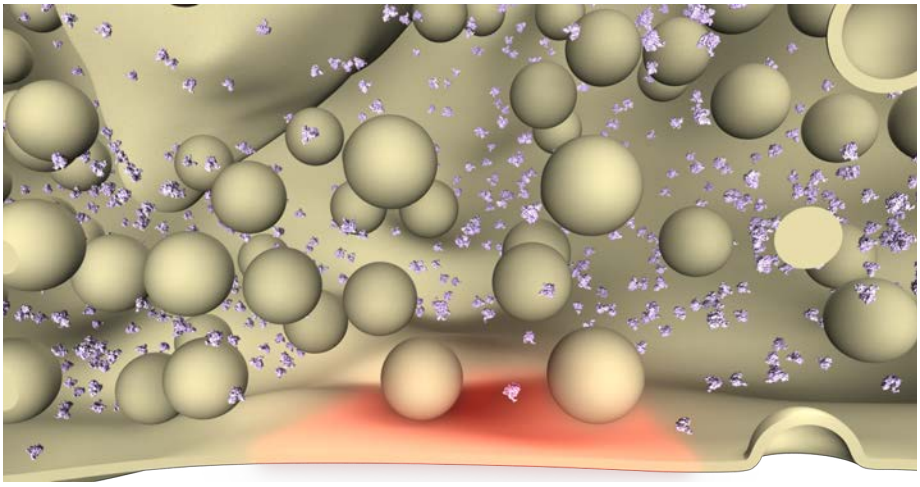
PDB-Identifier (structural information): 3c98.
Burgoyne, R.D., et al. (2009). Ann N Y Acad Sci 1152, 76-86.
Takamori, S., et al. (2006). Cell 127, 831-46.
Verhage, M., et al. (2000). Science 287, 864-69.

Munc18a

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE co-factor	0.474	4253.40 ± 207.07	28.40



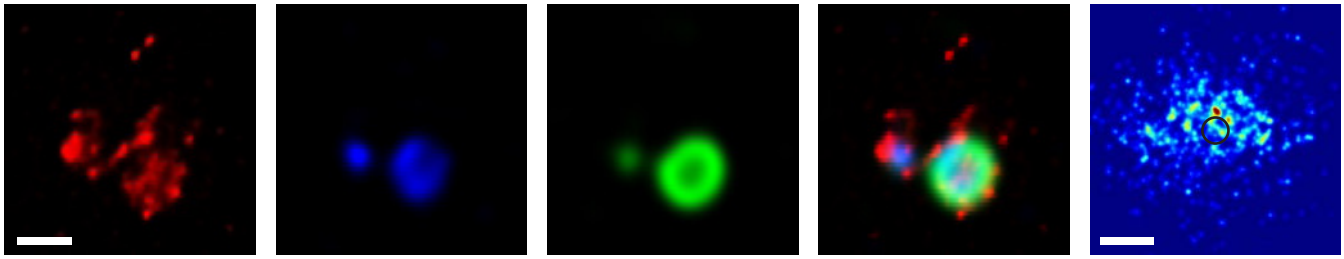




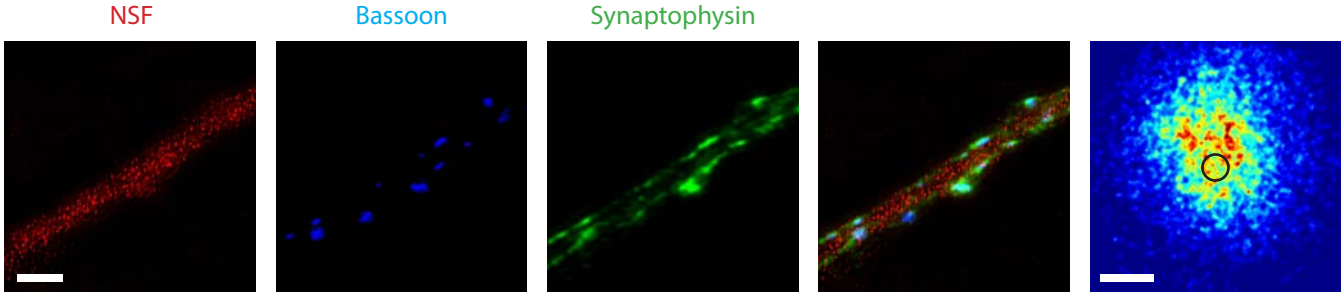
NSF (hexamer)

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE co-factor	0.554	677.45 ± 213.02	27.14

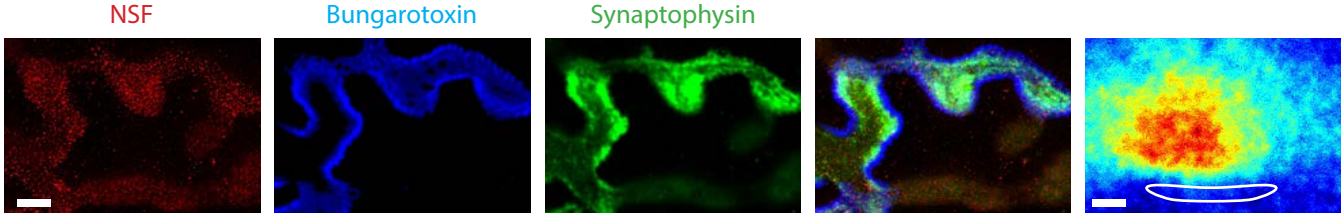
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

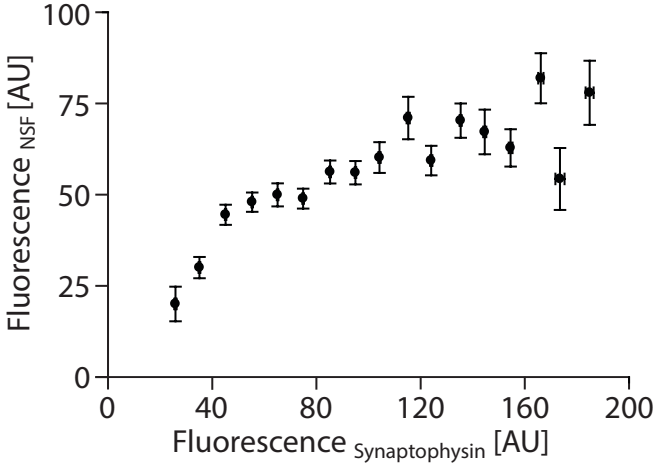


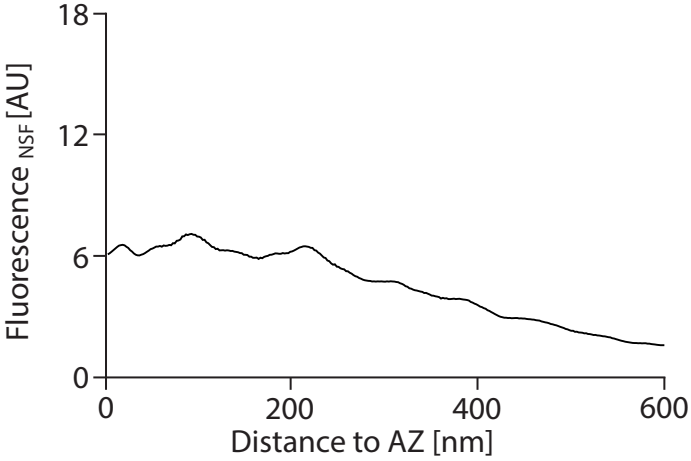
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for NSF):

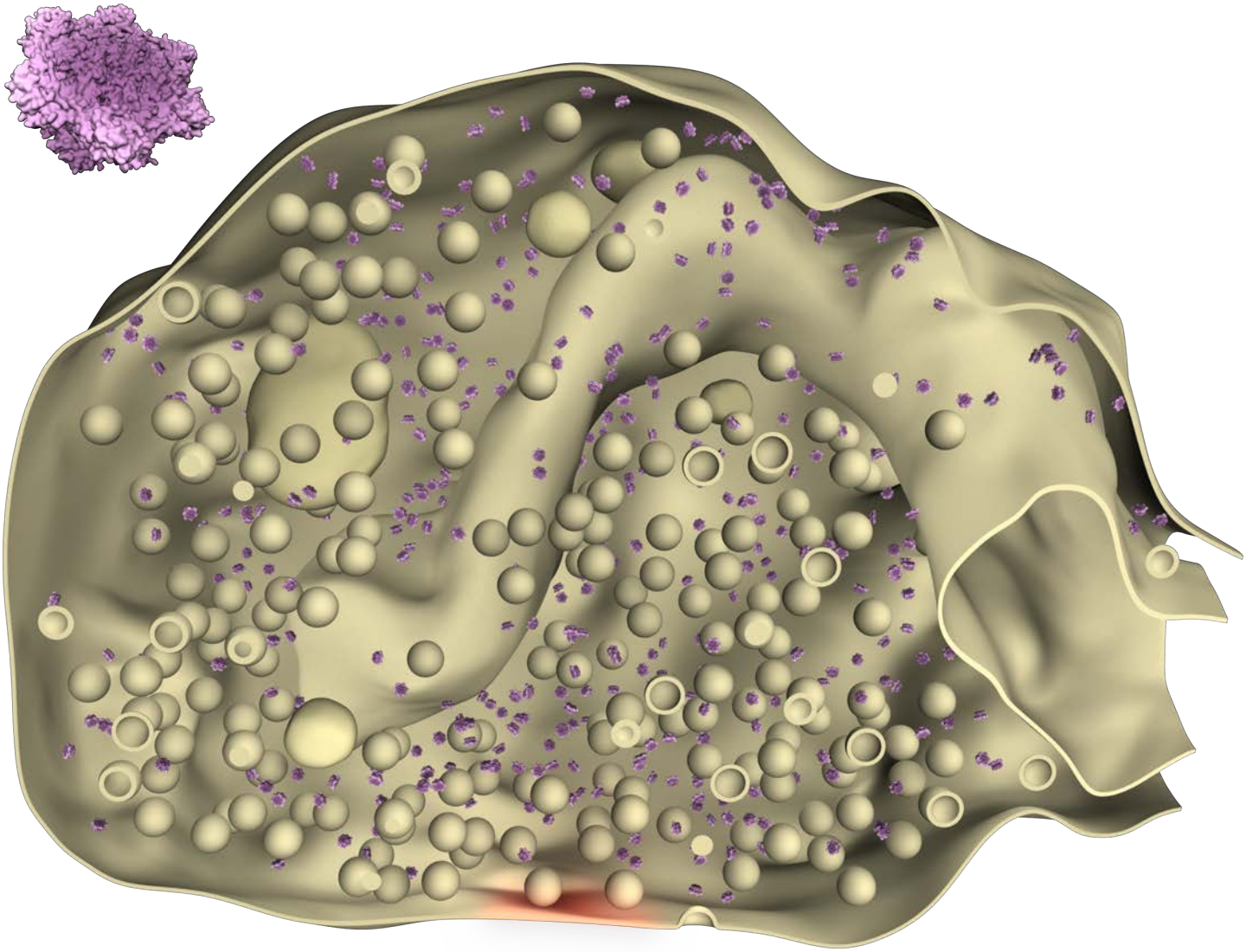
Immunoblots - Synaptic Systems (Göttingen, Germany), 123 001
Slicesynaptosome stainings - Synaptic Systems (Göttingen, Germany), 123 002
HC stainings - Synaptic Systems (Göttingen, Germany), 123 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 123 002

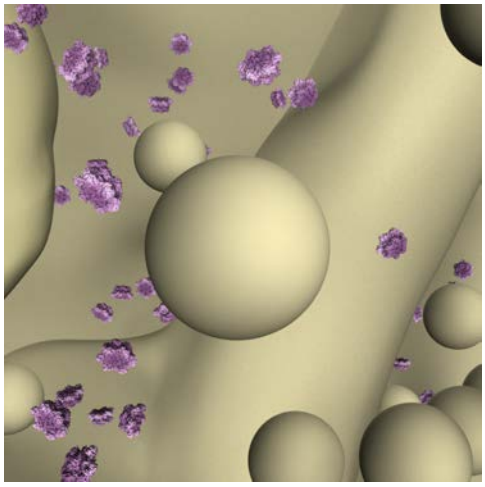
References:

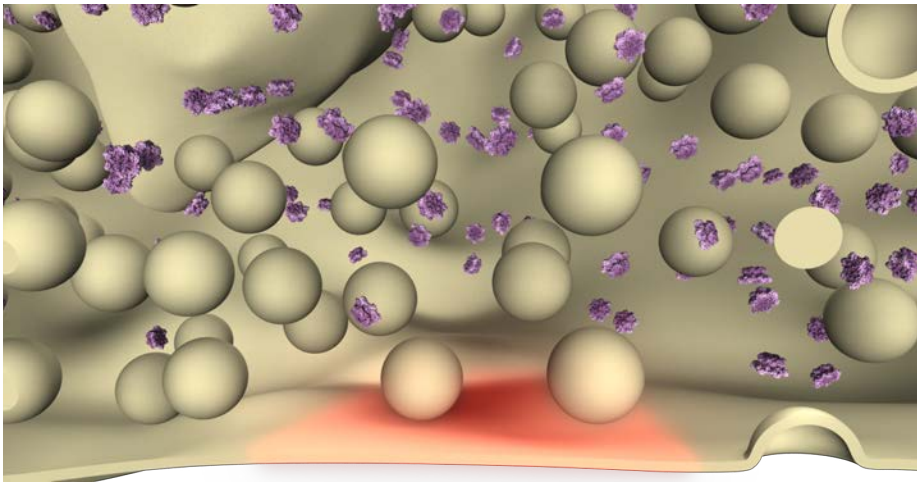
PDB-Identifier (structural information): 1qcs.
Söllner, T., et al. (1997a). Cell 75, 409-18.
Jahn, R., and Scheller, R.H. (2006) Nat Rev Mol Cell Biol 7, 631-43.
Takamori, S., et al. (2006). Cell 127, 831-46.

NSF (hexamer)

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE co-factor	0.554	677.45 ± 213.02	27.14



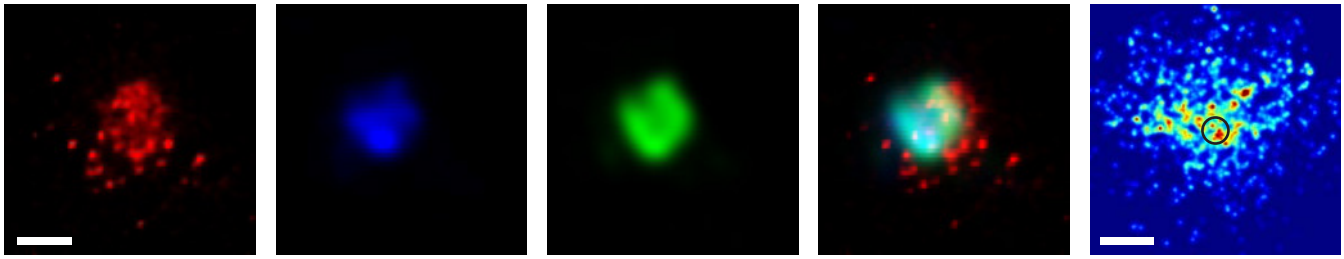




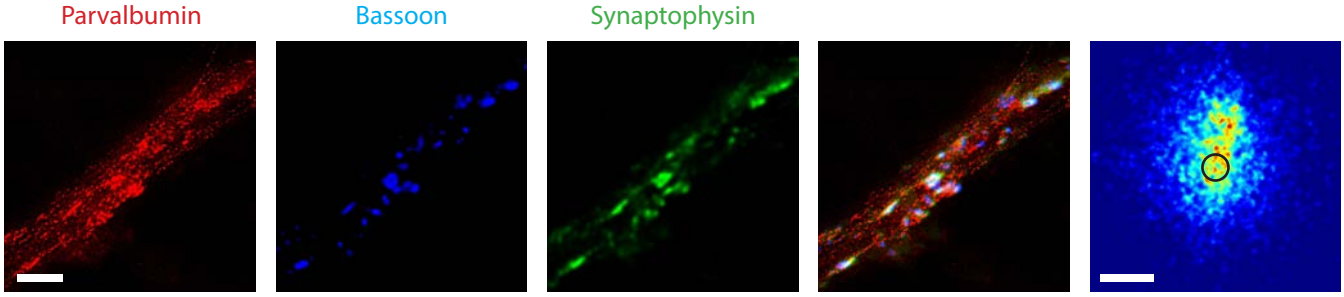
Parvalbumin

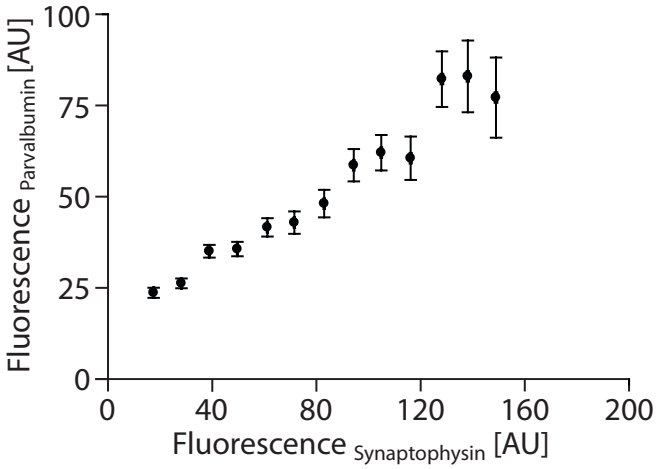
Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium buffer	0.013	681.10 ± 34.31	4.55

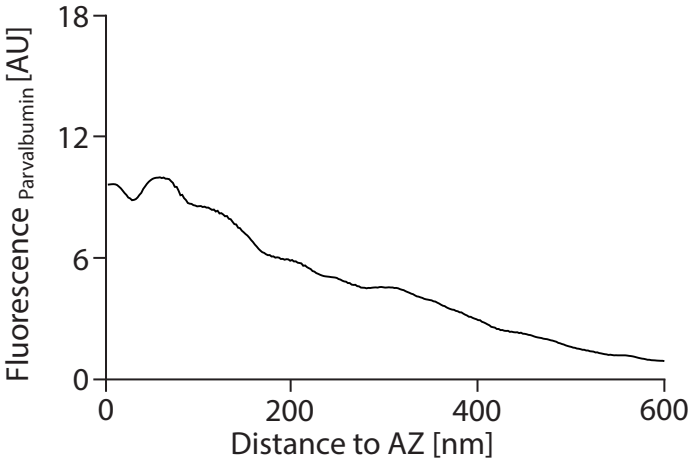
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)



Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)







Antibodies used (for Parvalbumin):

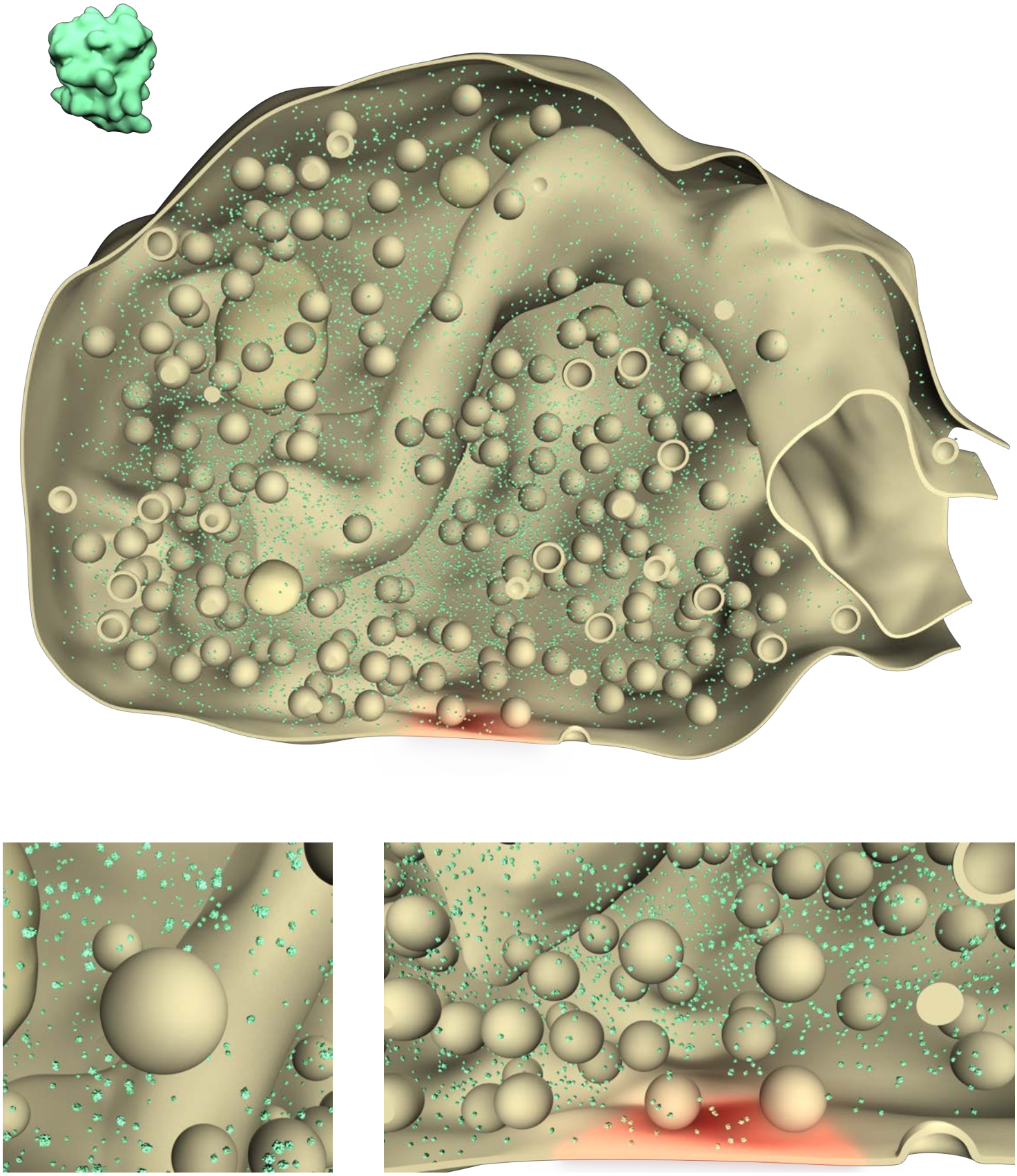
Immunoblots - Swant (Marly, Switzerland), PV25
Slice/synaptosome stainings - Swant (Marly, Switzerland), PV25
HC stainings - Swant (Marly, Switzerland), PV25
NMJ stainings - not applicable

References:

PDB-Identifier (structural information): 1rwy.
Schwaller, B. (2010). Cold Spring Harb Perspect Biol 2, a004051.
Schwaller, B., et al. (2002). Cerebellum 1, 241-58.
Haiech, J., et al. (1979). Biochemistry 18, 2752-8.
Eberhard, M., and Erne, P. (1994). Eur J Biochem 222, 21-6.

Parvalbumin

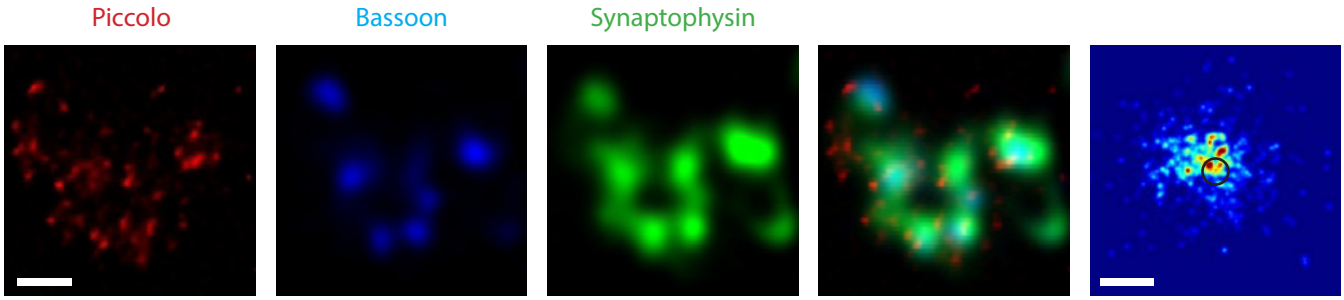
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium buffer	0.013	681.10 ± 34.31	4.55



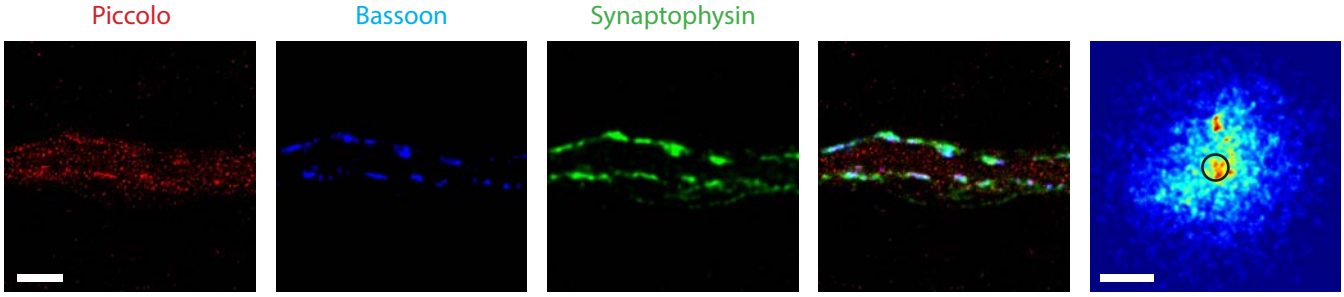
Piccolo

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Active zone	0.092	100.45 ± 8.40	0.67

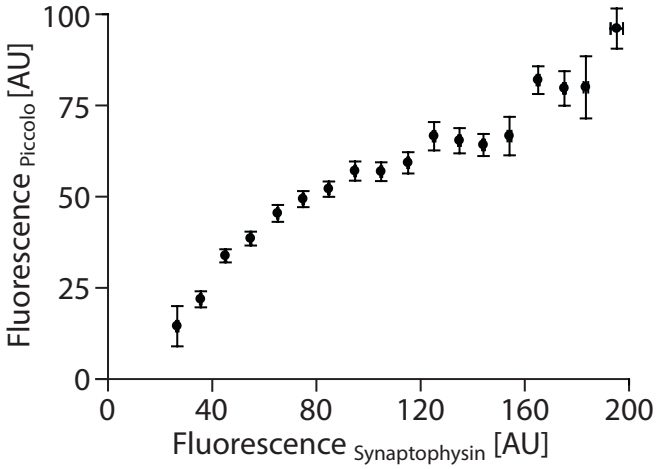
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

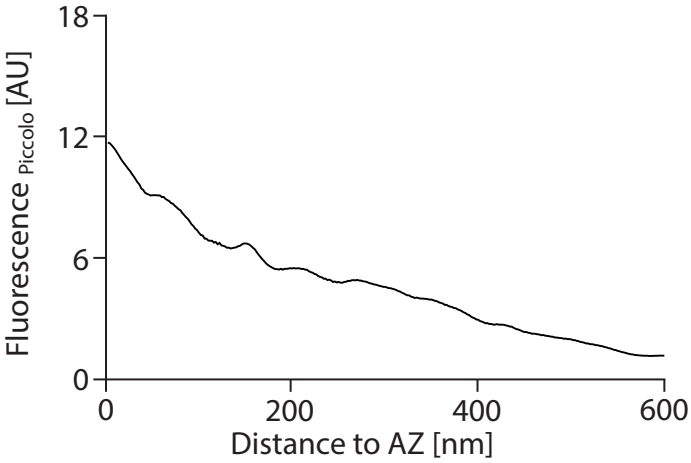


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Piccolo):

Immunoblots - not applicable

Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 142 003

HC stainings - Synaptic Systems (Göttingen, Germany), 142 003

NMJ stainings - Synaptic Systems (Göttingen, Germany), 142 003

References:

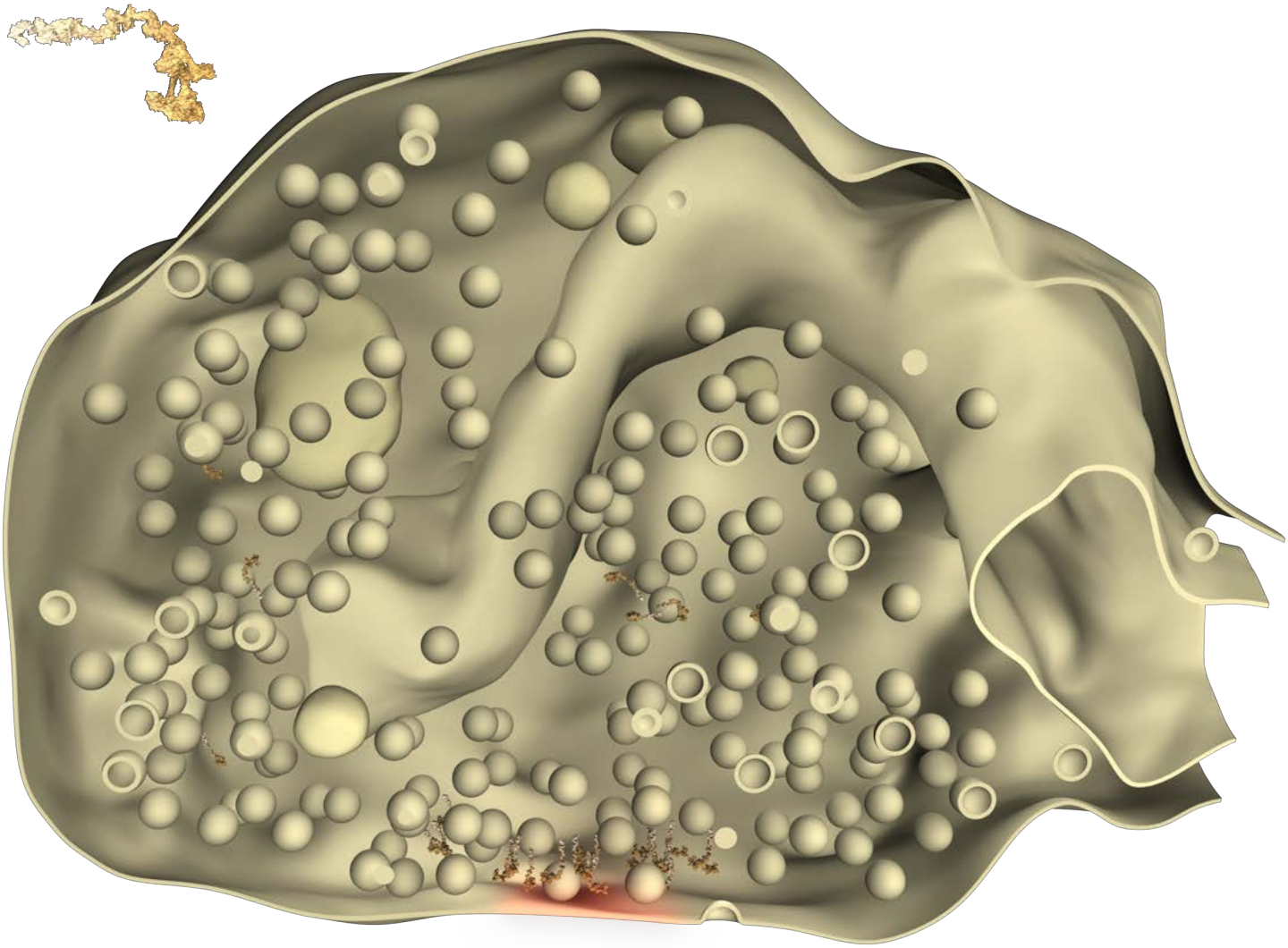
PDB-Identifier (structural information): 1rh8, 1ujd.

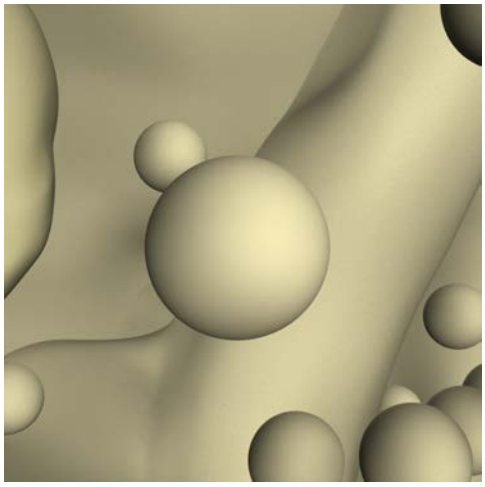
Dani, A., et al. (2010). Neuron 68, 843-56.

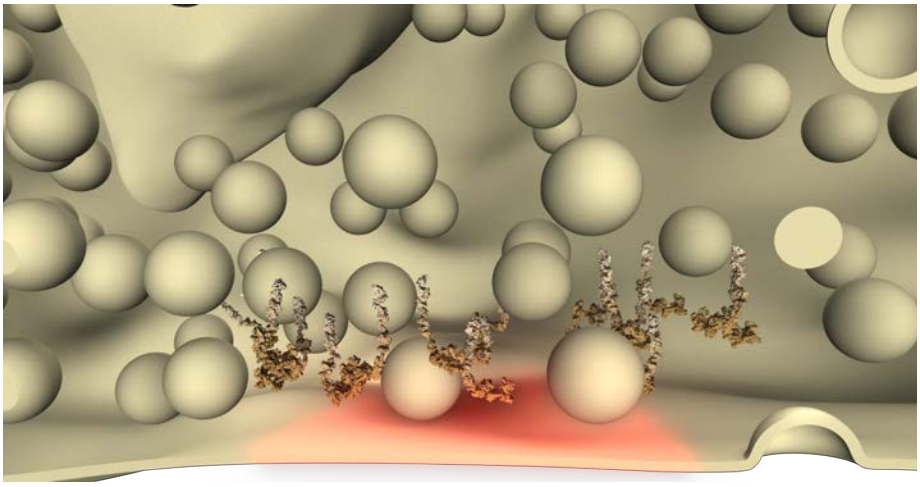
Garner, C. C., et al. (2000). Curr Opin Neurobiol 10, 321-7.

Piccolo

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Active zone	0.092	100.45 ± 8.40	0.67



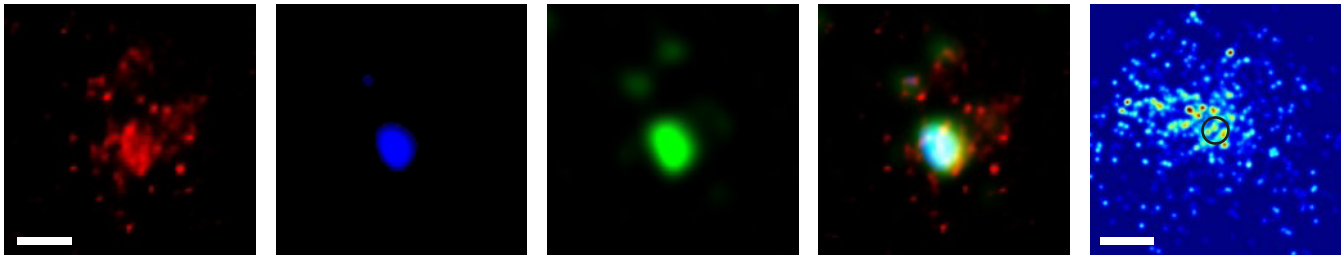




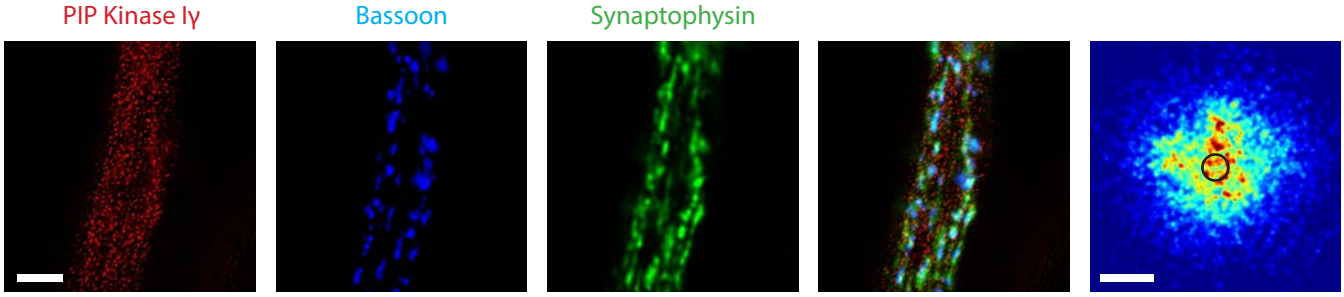
PIP Kinase Iγ

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.038	465.72 ± 18.86	3.11

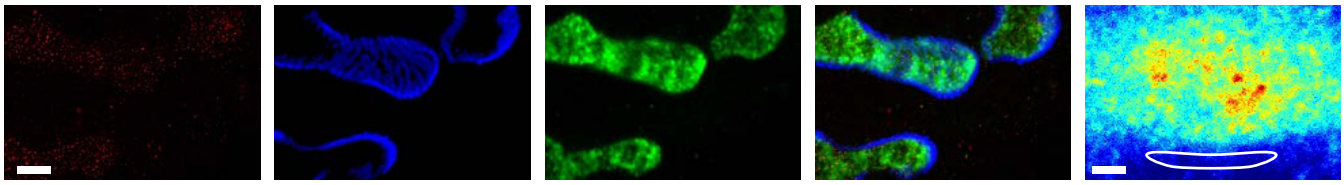
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

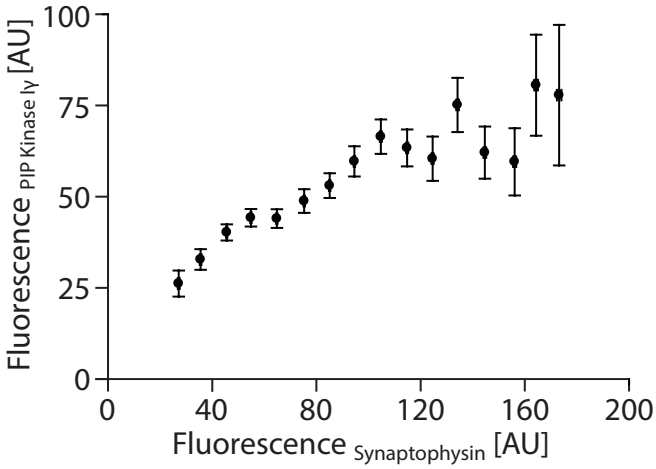


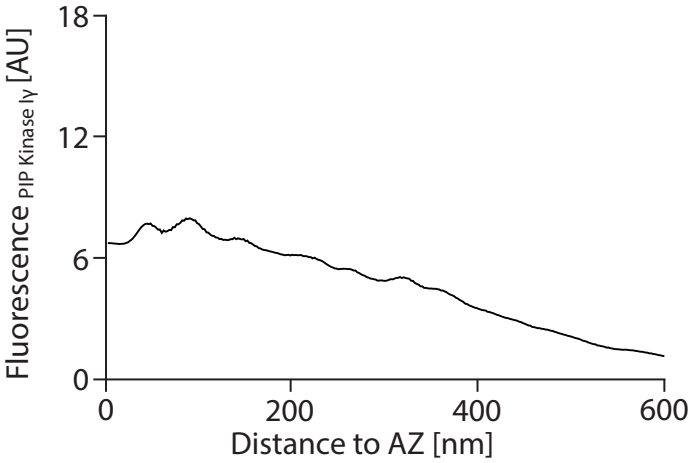
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for PIP Kinase Iγ):

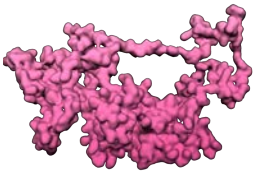
Immunoblots - Volker Haucke (FMP, Berlin, Germany)
Slice/synaptosome stainings - Volker Haucke (FMP, Berlin, Germany)
HC stainings - Volker Haucke (FMP, Berlin, Germany)
NMJ stainings - Volker Haucke (FMP, Berlin, Germany)

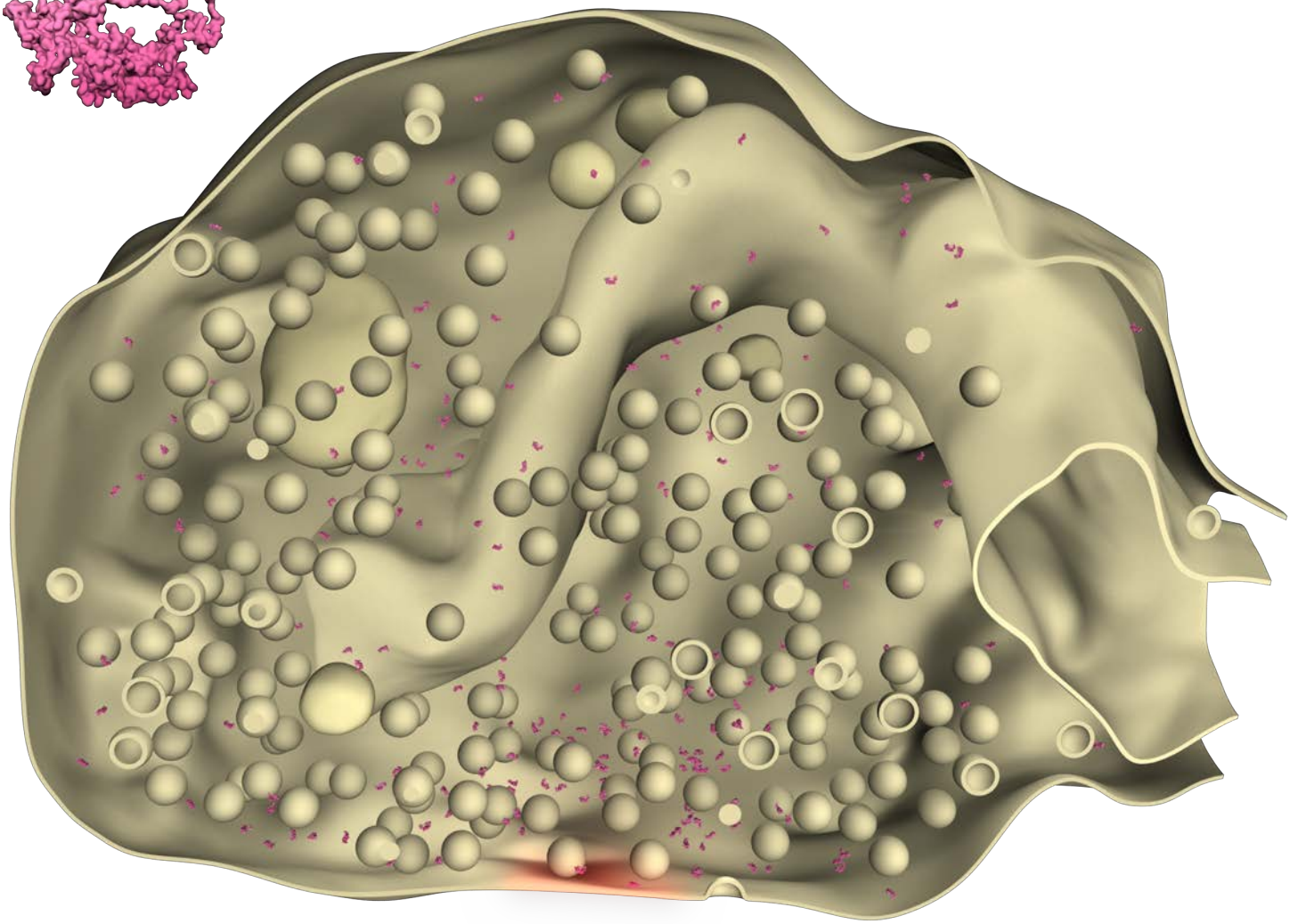
References:

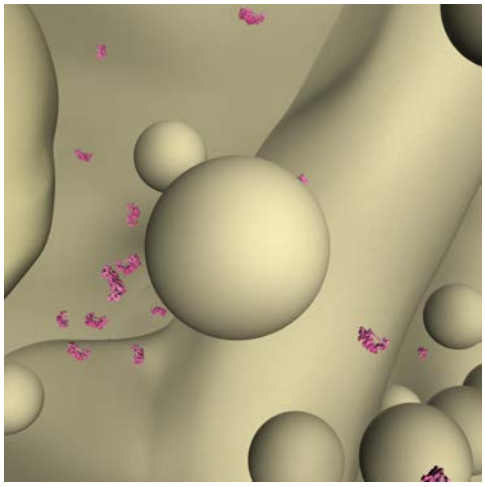
PDB-Identifier (structural information): 3h1z, 2gk9.
Giudici, M.L., et al. (2004). Biochem J 379, 489-96.
Krauss, M., et al. (2003). J Cell Biol 162, 113-24.

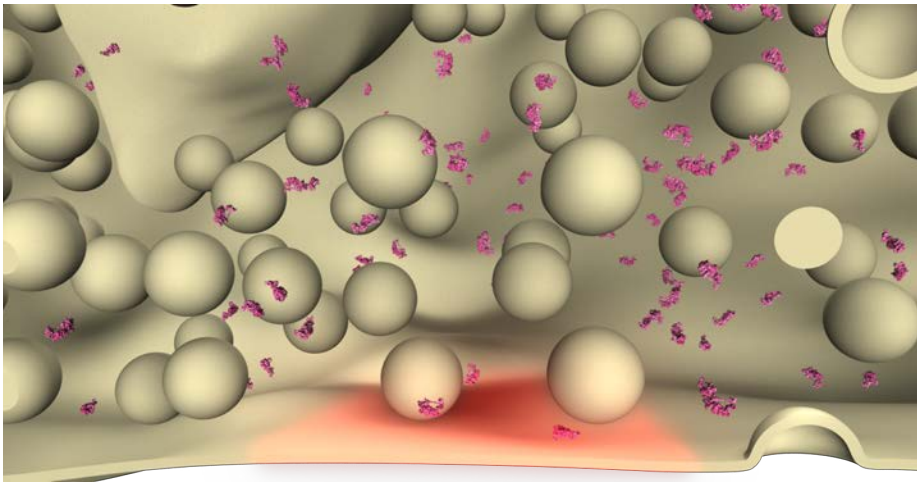
PIP Kinase Iγ

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.038	465.72 ± 18.86	3.11





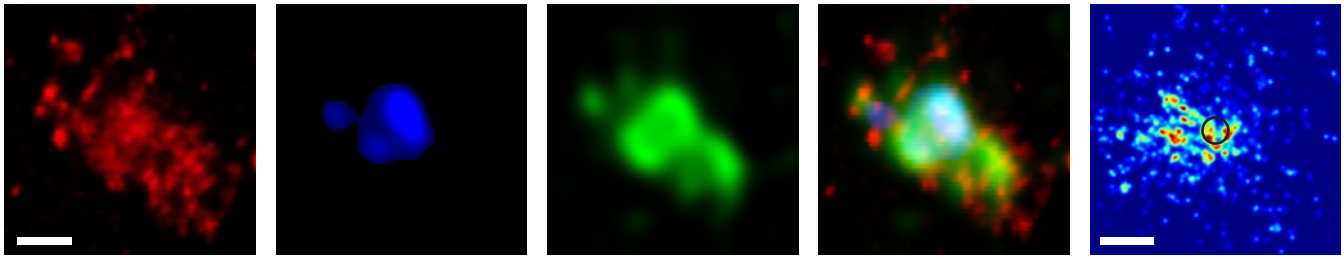




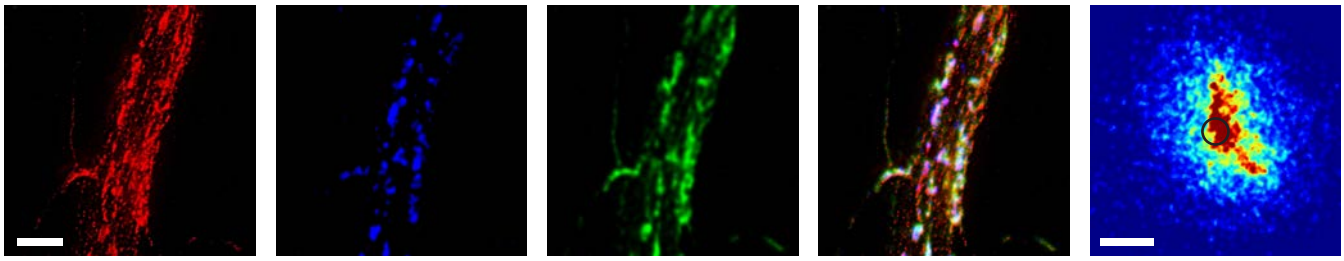
Rab3

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Small GTPase	0.776	18846.58 ± 996.01	125.85

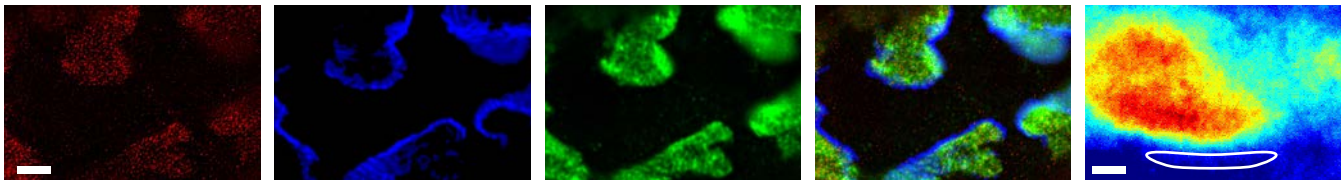
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

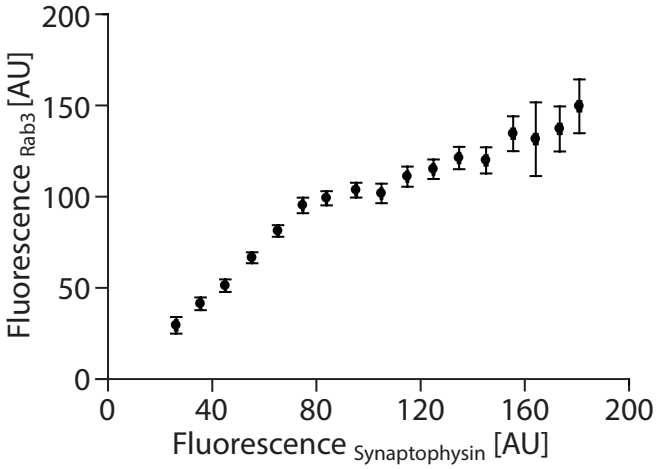


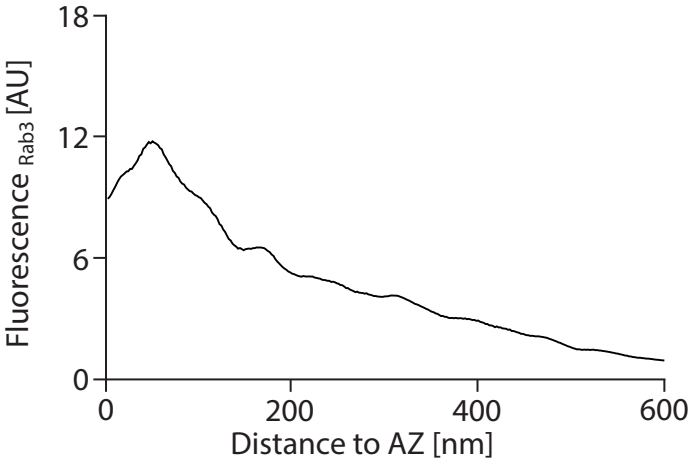
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Rab3):

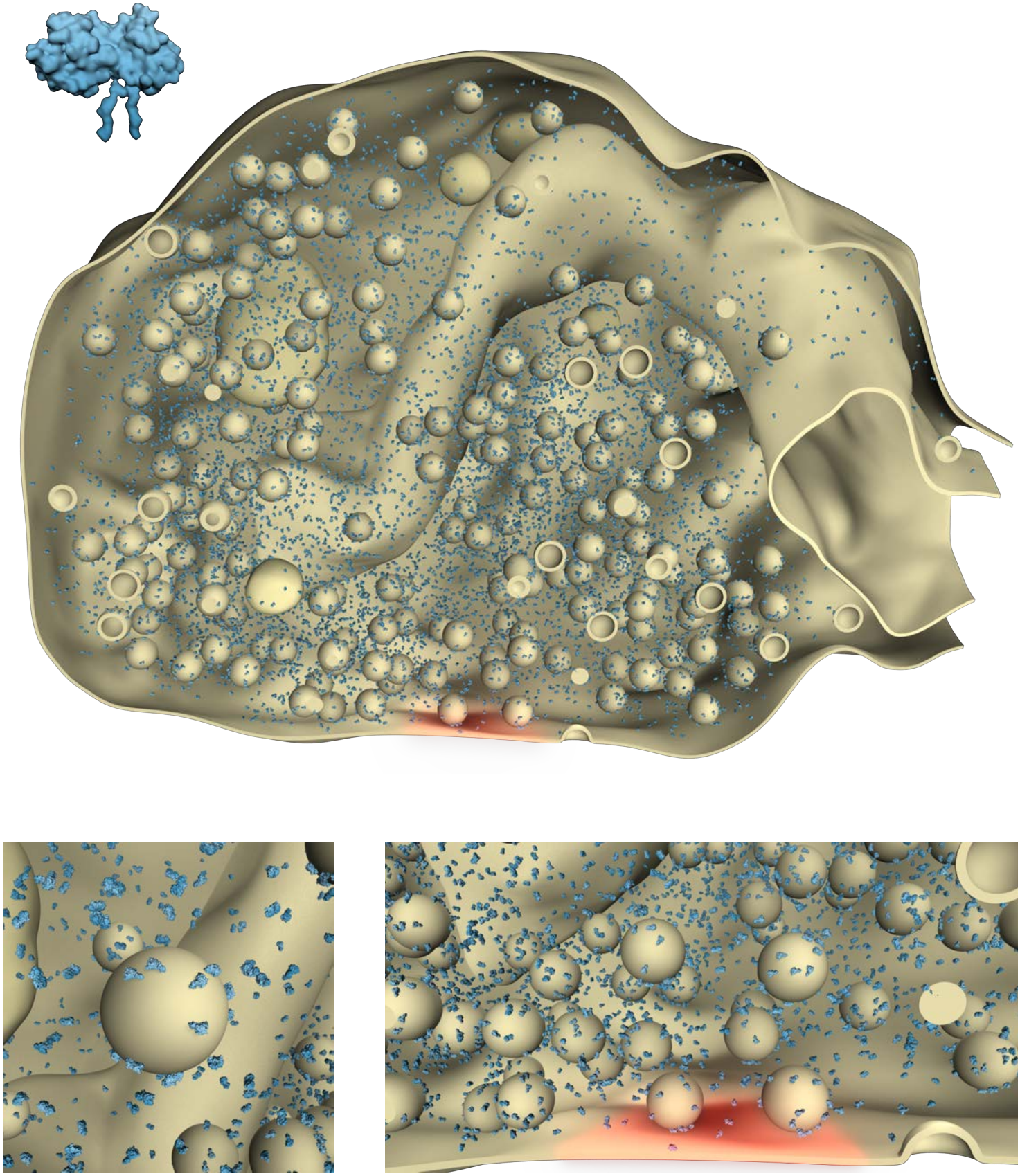
Immunoblots - Synaptic Systems (Göttingen, Germany), 107 111
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 107 003
HC stainings - BD Biosciences (Heidelberg, Germany), 610379
NMJ stainings - Synaptic Systems (Göttingen, Germany), 107 003

References:

PDB-Identifier (structural information): 1zbd.
Schlüter, O.M., et al. (2004). J Biol Chem 277, 40919-29.
Fische von Mollard, G., et al. (1991), Nature 349, 79-81.
Takamori, S., et al. (2006). Cell 127, 831-46.

Rab3

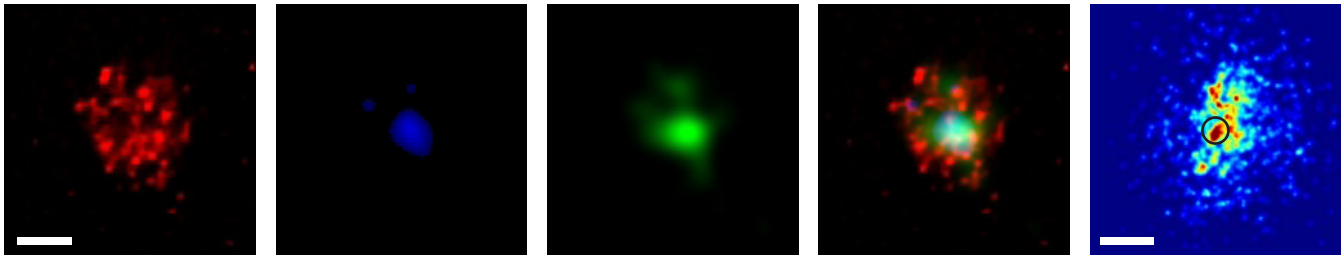
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Small GTPase	0.776	18846.58 ± 996.01	125.85



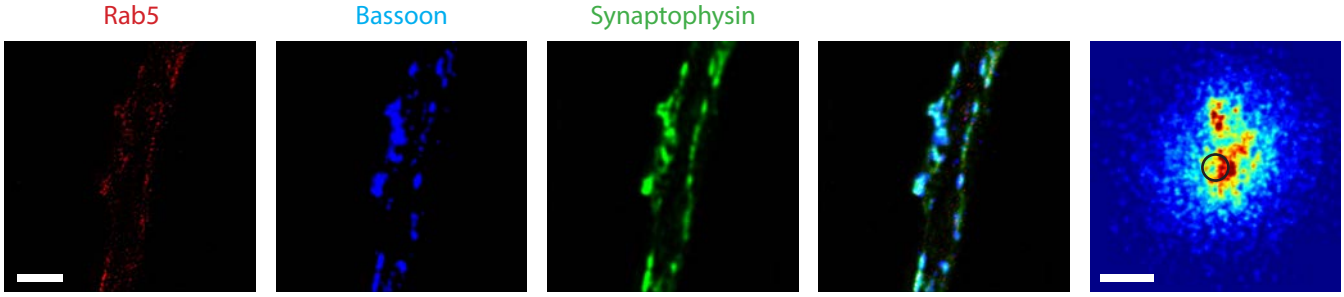
Rab5

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Small GTPase	0.025	633.62 ± 37.26	4.23

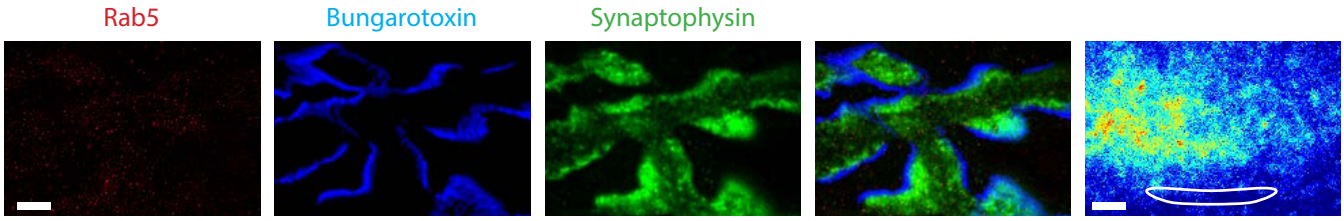
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

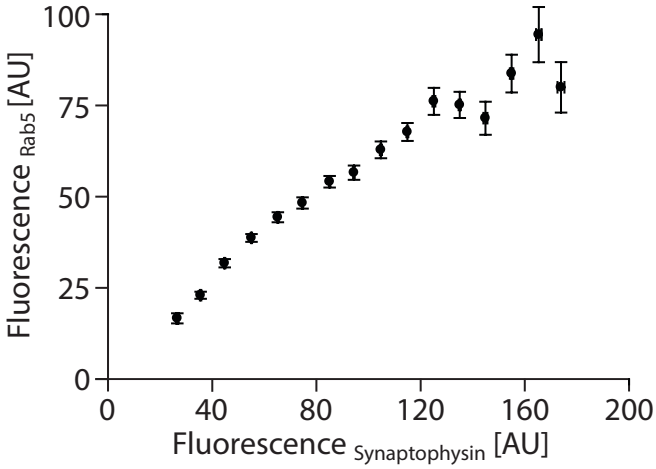


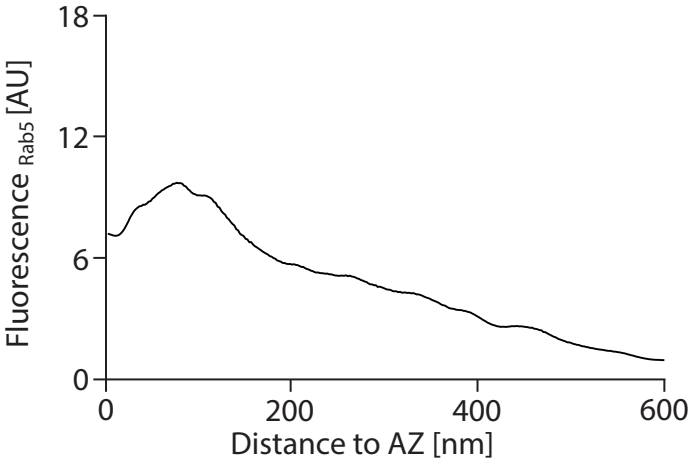
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Rab5):

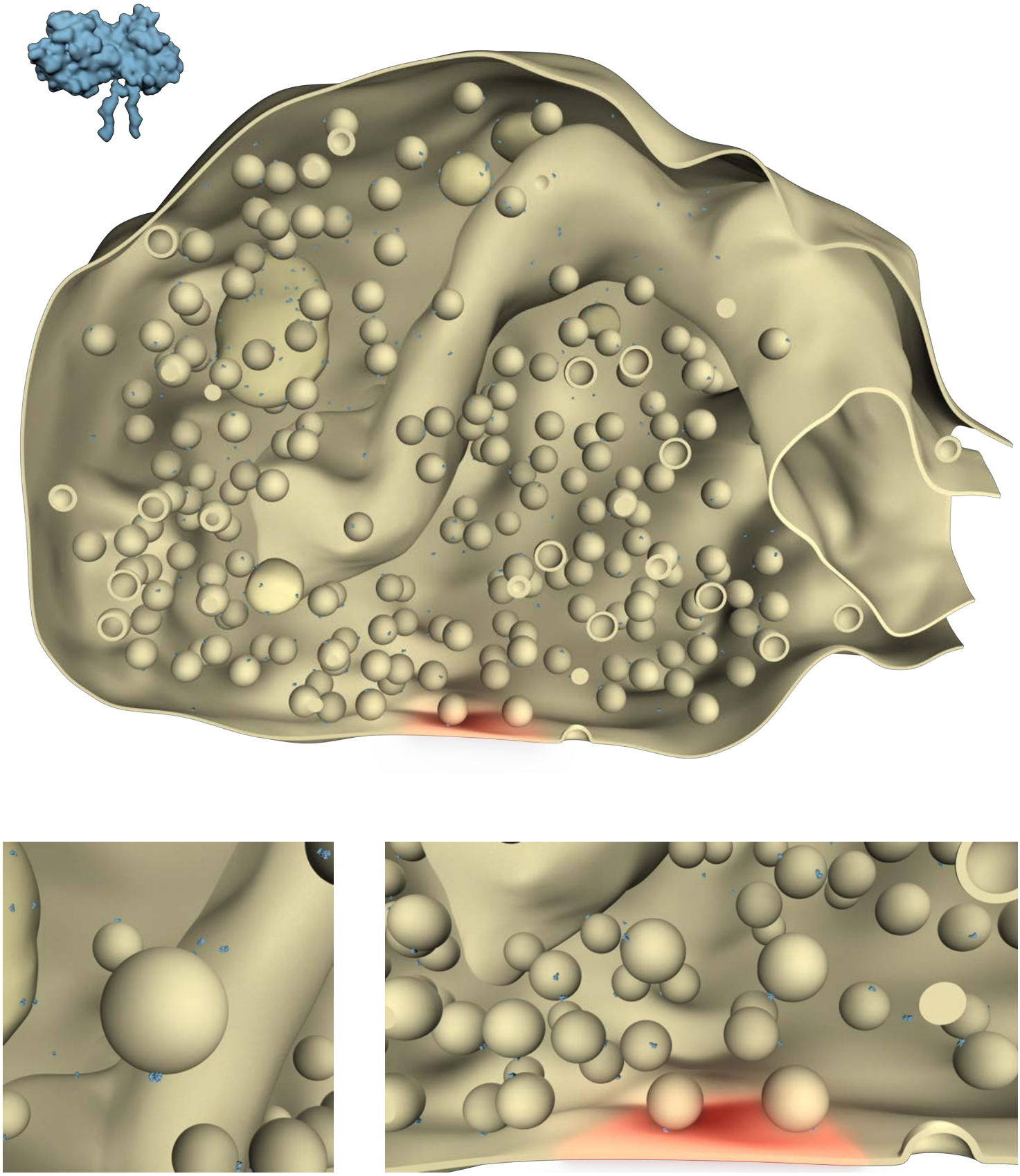
Immunoblots - Synaptic Systems (Göttingen, Germany), 108 011
Slice/synaptosome stainings - Cell Signaling Technology (Beverly, Massachusetts, USA), 3547
HC stainings - Cell Signaling Technology (Beverly, Massachusetts, USA), 3547
NMJ stainings - Cell Signaling Technology (Beverly, Massachusetts, USA), 3547

References:

PDB-Identifier (structural information): not available; assembled from individual domains.
Stenmark, H., et al. (1994). EMBO J 13, 1287-96.
Stenmark, H., et al. (1995). Cell 83, 423-32.
Takamori, S., et al. (2006). Cell 127, 831-46.

Rab5

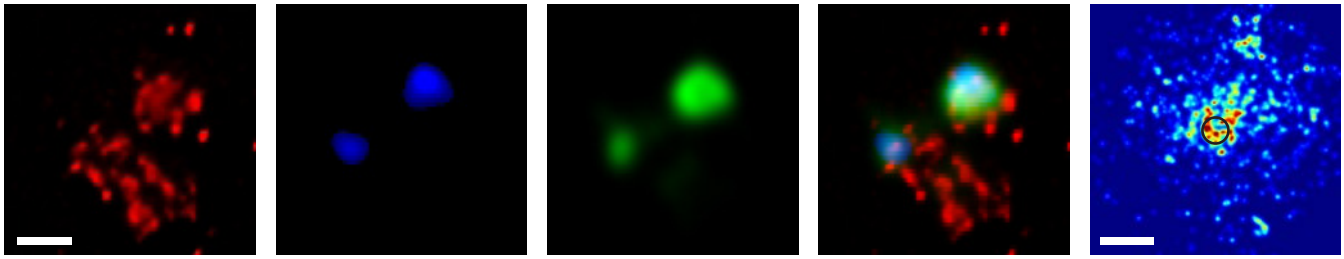
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Small GTPase	0.025	633.62 ± 37.26	4.23



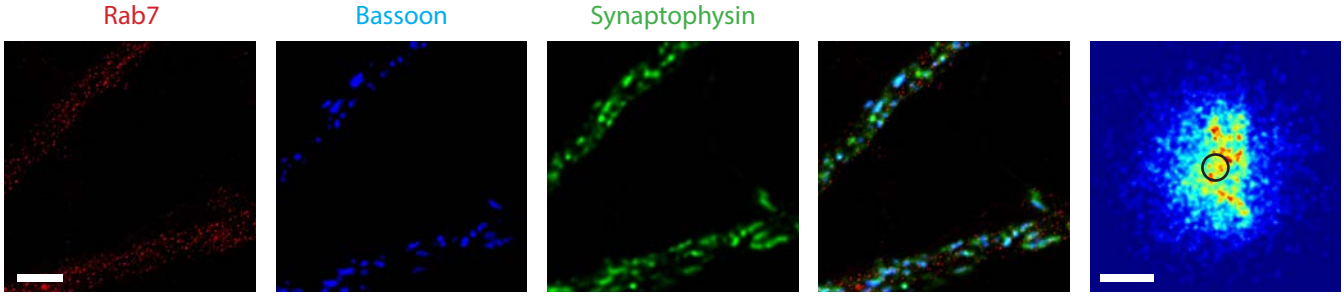
Rab7

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Small GTPase	0.135	4457.20 ± 319.80	29.76

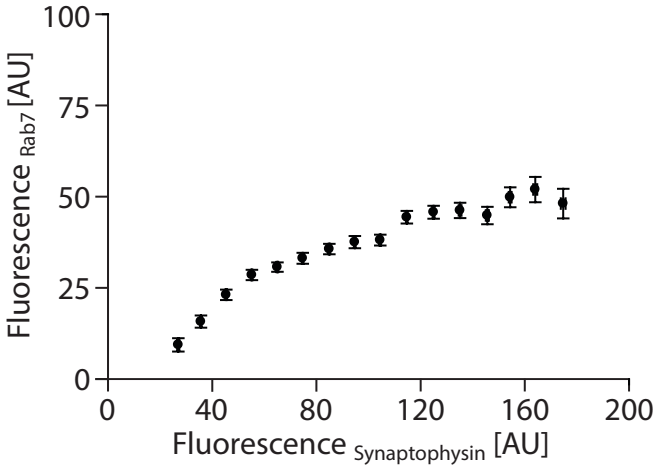
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

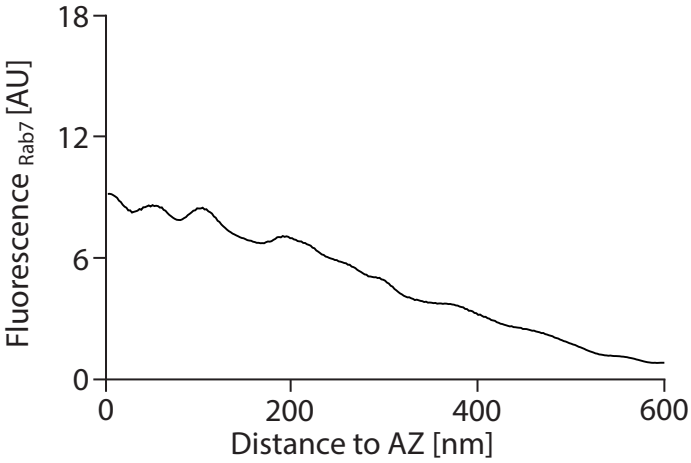


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Rab7):

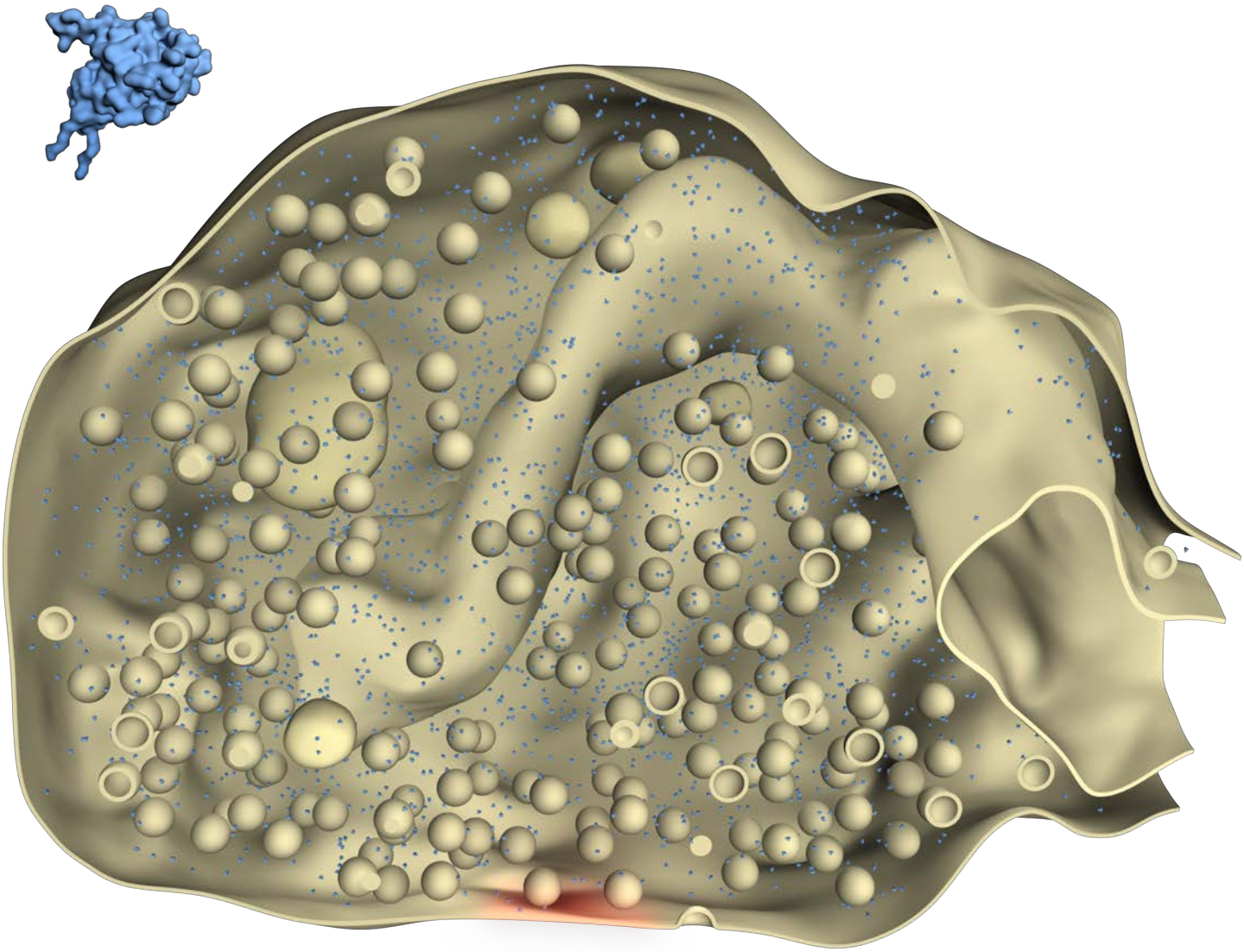
Immunoblots - Novus Biologicals (Littleton, Colorado, USA), NBP1-05048
Slice/synaptosome stainings - Santa Cruz (Heidelberg, Germany), sc-81922
HC stainings - Novus Biologicals (Littleton, Colorado, USA), NBP1-05048
NMJ stainings - Santa Cruz (Heidelberg, Germany), sc-81922

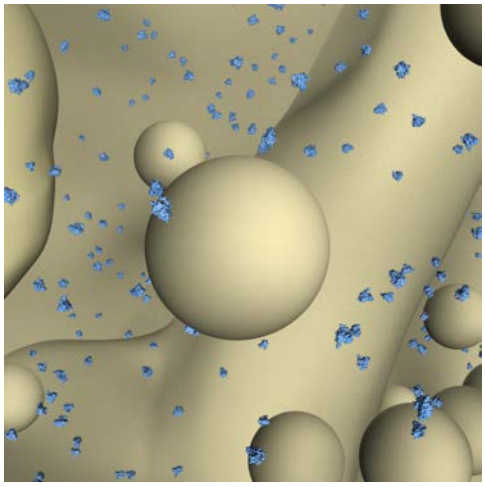
References:

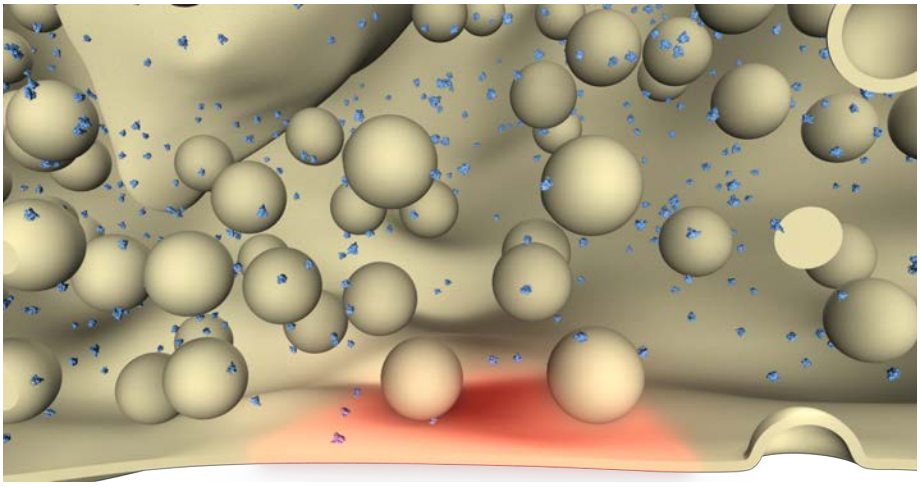
PDB-Identifier (structural information): 1vg1.
Takamori, S., et al. (2006). Cell 127, 831-86.
Bucci, C., et al. (2000). Mol Biol Cell 11, 467-80.

Rab7

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Small GTPase	0.135	4457.20 ± 319.80	29.76



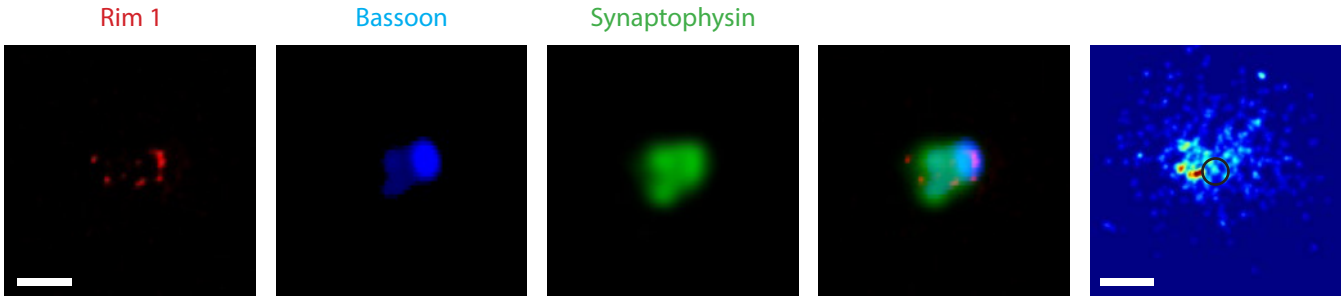




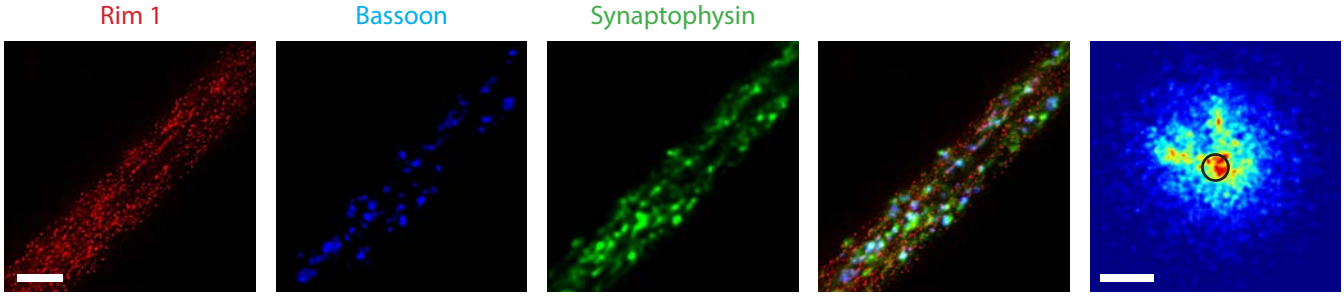
Rim 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Active zone	0.012	38.63 ± 4.23	0.26

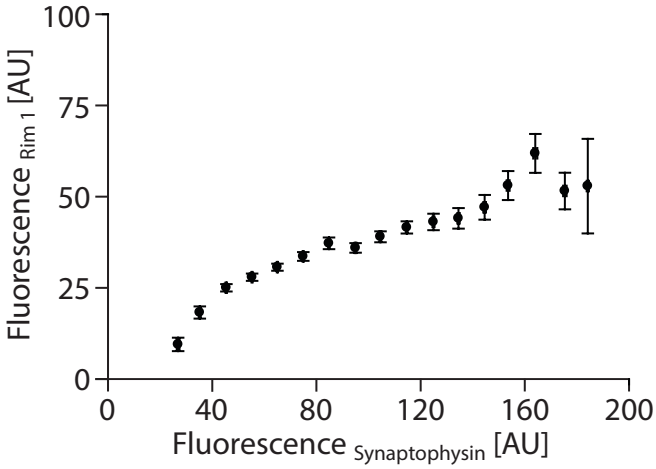
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

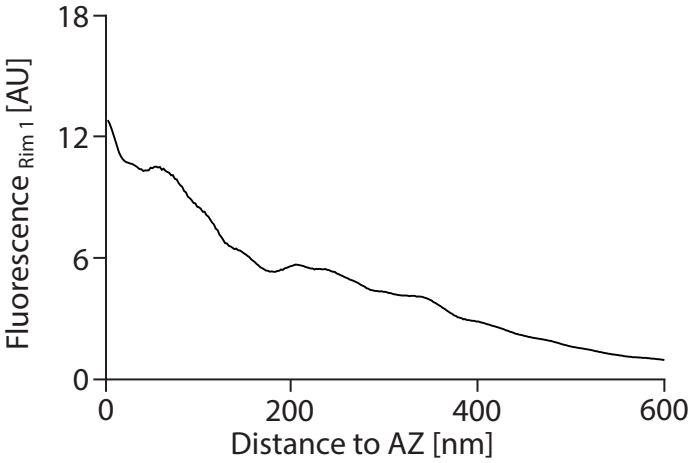


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Rim 1):

Immunoblots - not applicable

Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 140 003

HC stainings - Synaptic Systems (Göttingen, Germany), 140 003

NMJ stainings - Synaptic Systems (Göttingen, Germany), 140 003

References:

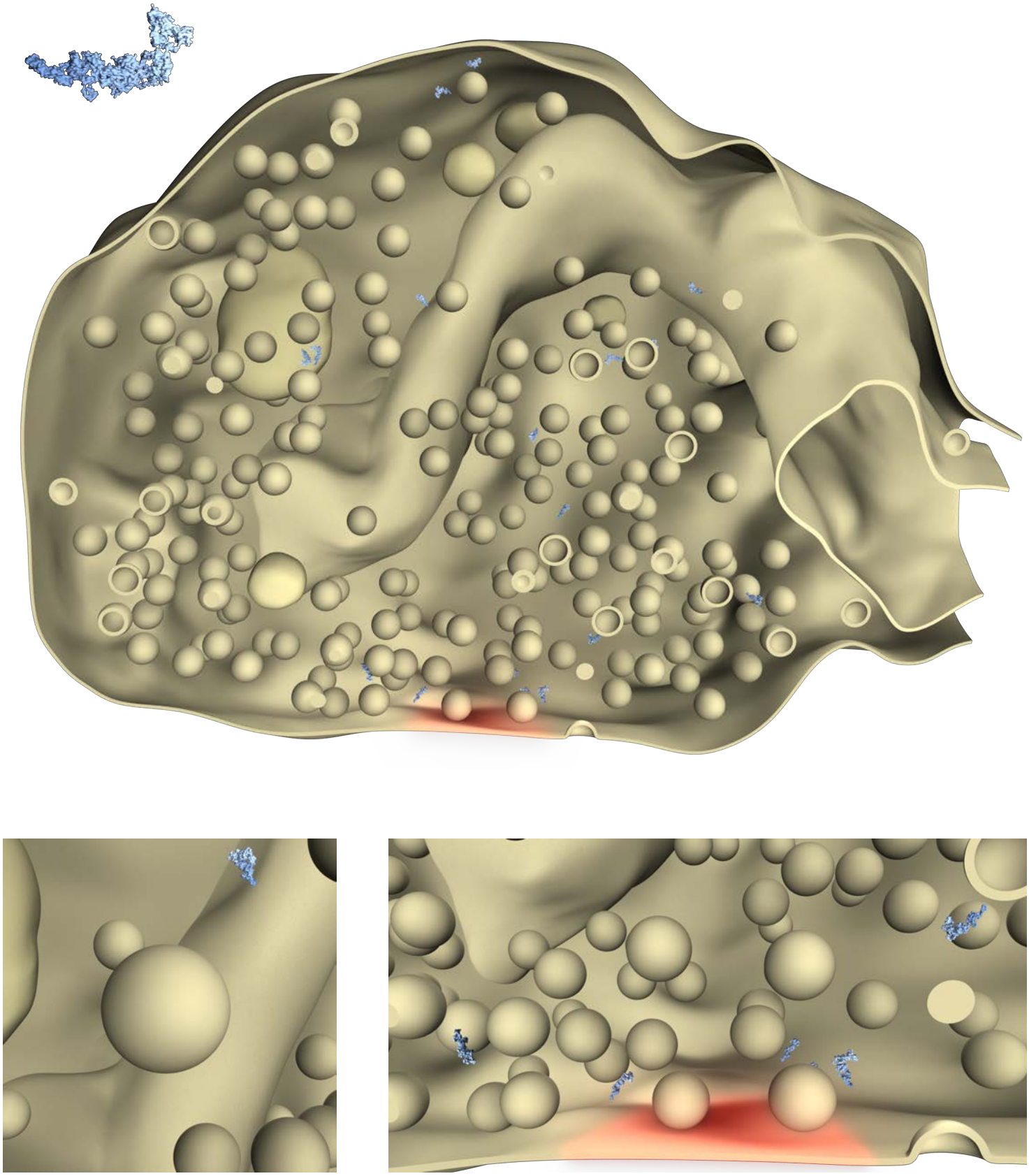
PDB-Identifier (structural information): 2a20, 1zub, 2q3x, 1zbd.

Kaeser, P. S. and Südhof T. C. (2005). Biochem Soc Trans 33, 1345-9.

Südhof T. C. (2012). Neuron 75, 11-25.

Rim 1

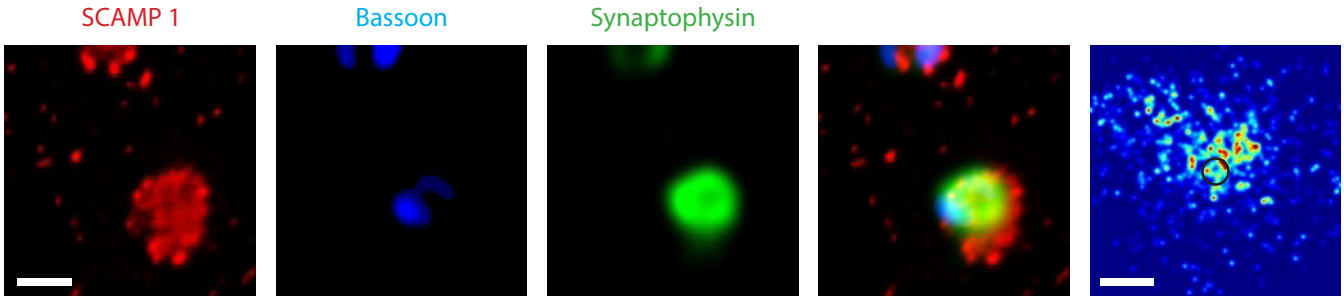
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Active zone	0.012	38.63 ± 4.23	0.26



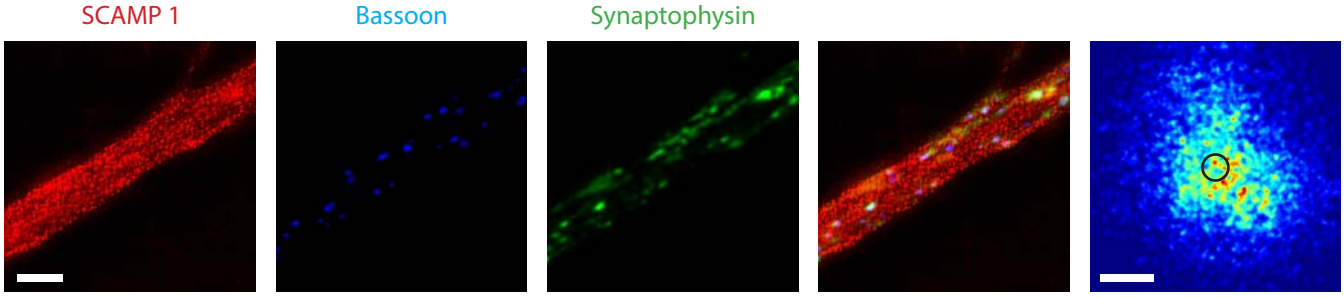
SCAMP 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Secretory	0.091	1459.50 ± 115.53	9.75

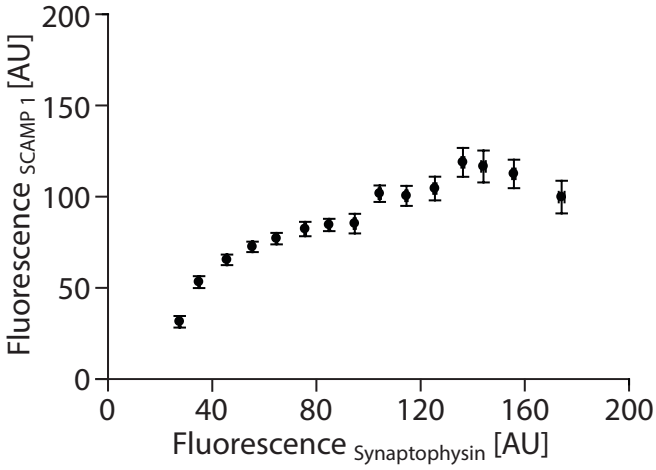
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

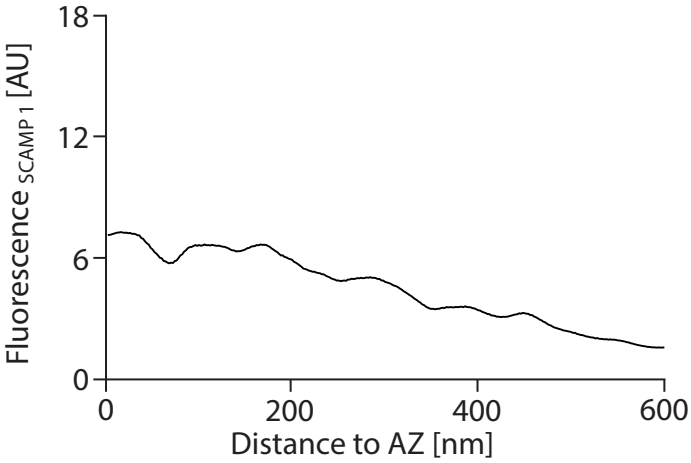


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for SCAMP 1):

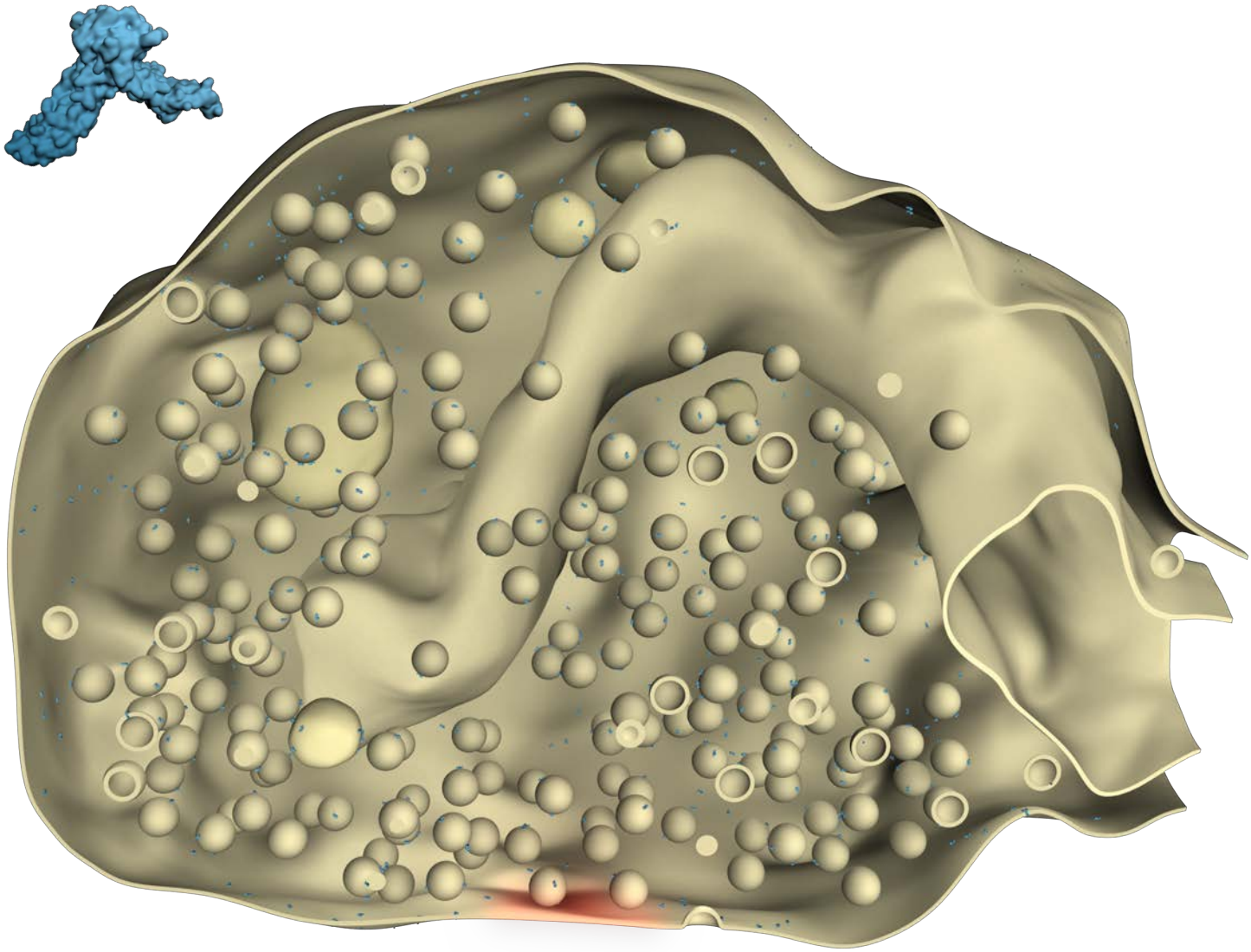
Immunoblots - Synaptic Systems (Göttingen, Germany), 121 001
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 121 001
HC stainings - Synaptic Systems (Göttingen, Germany), 121 001
NMJ stainings - Synaptic Systems (Göttingen, Germany), 121 001

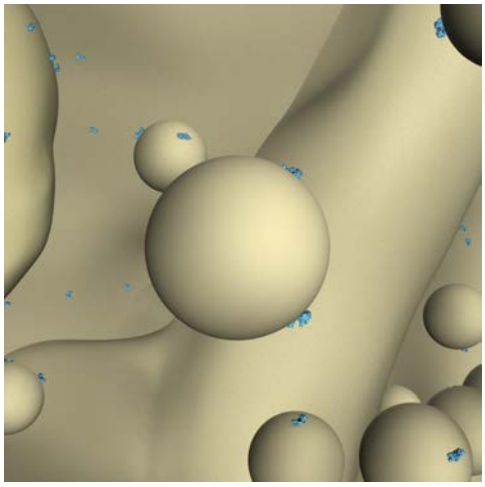
References:

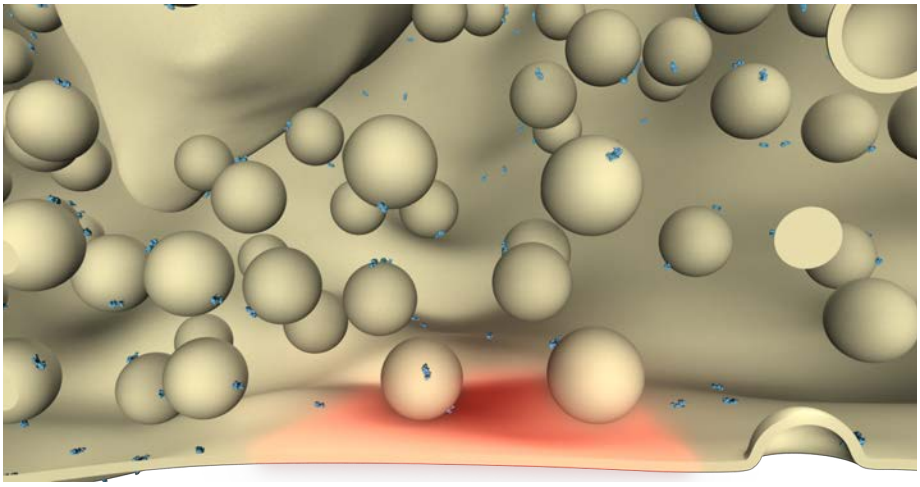
PDB-Identifier (structural information): not available; assembled from individual domains.
Castle, A., and Castle, D. (2005). J Cell Sci 118, 3769-80.
Takamori, S., et al. (2006). Cell 127, 831-846.

SCAMP 1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Secretory	0.091	1459.50 ± 115.53	9.75



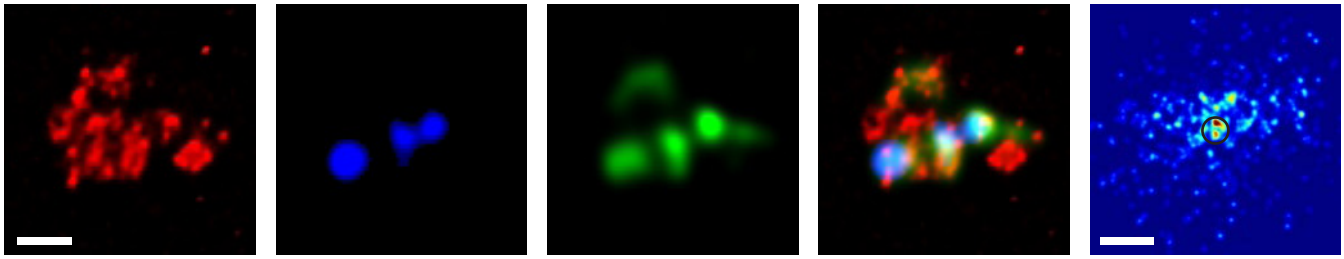




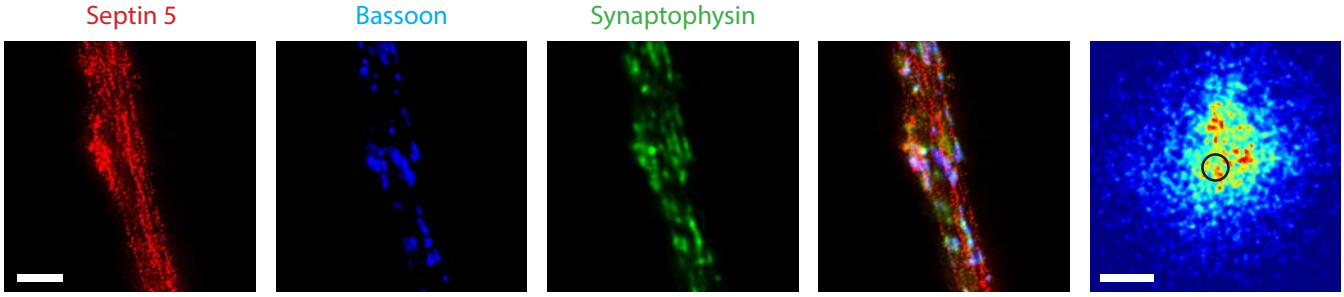
Septin 5

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Cytoskeleton	0.122	1726.20 ± 64.38	11.53

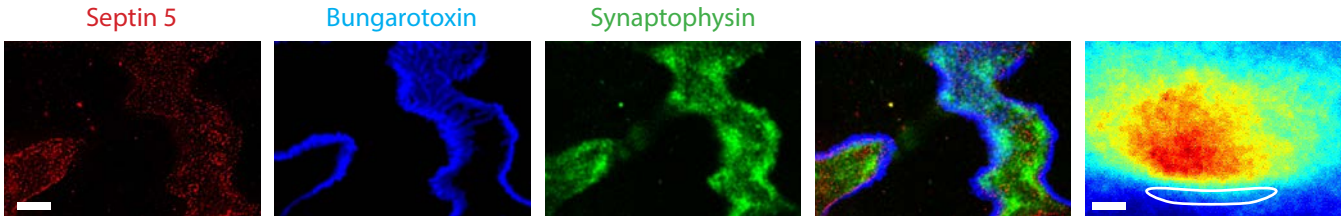
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

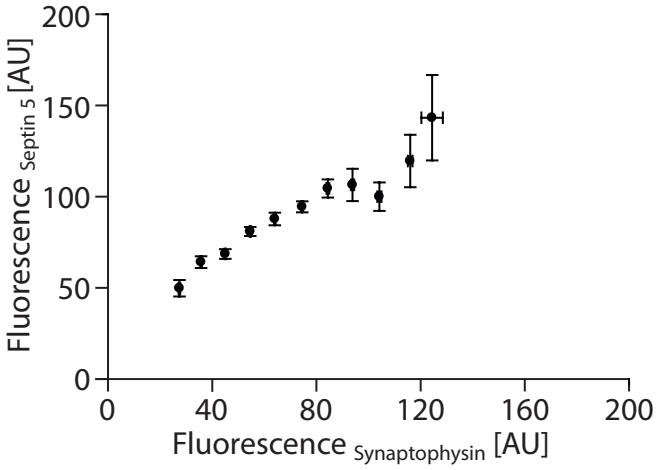


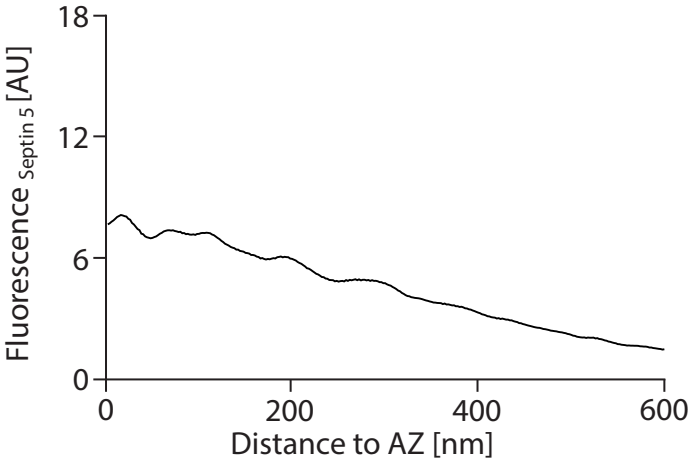
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Septin 5):

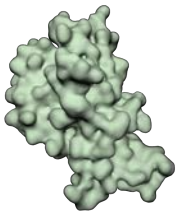
Immunoblots - Volker Haucke (FMP, Berlin, Germany)
Slice/synaptosome stainings - Volker Haucke (FMP, Berlin, Germany)
HC stainings - Volker Haucke (FMP, Berlin, Germany)
NMJ stainings - Volker Haucke (FMP, Berlin, Germany)

References:

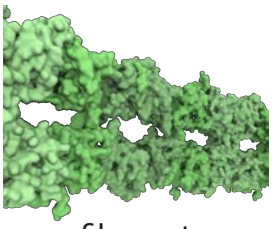
PDB-Identifier (structural information): 2qag.
Mostowy, S., and Cossart, P. (2012). Nat Rev Mol Cell Biol 13, 183-94.
Beites, C.L., et al. (1999). Nat Neurosci 2, 434-9.
Amin, N.D., et al. (2008). J Neurosci 28, 3631-43.

Septin 5

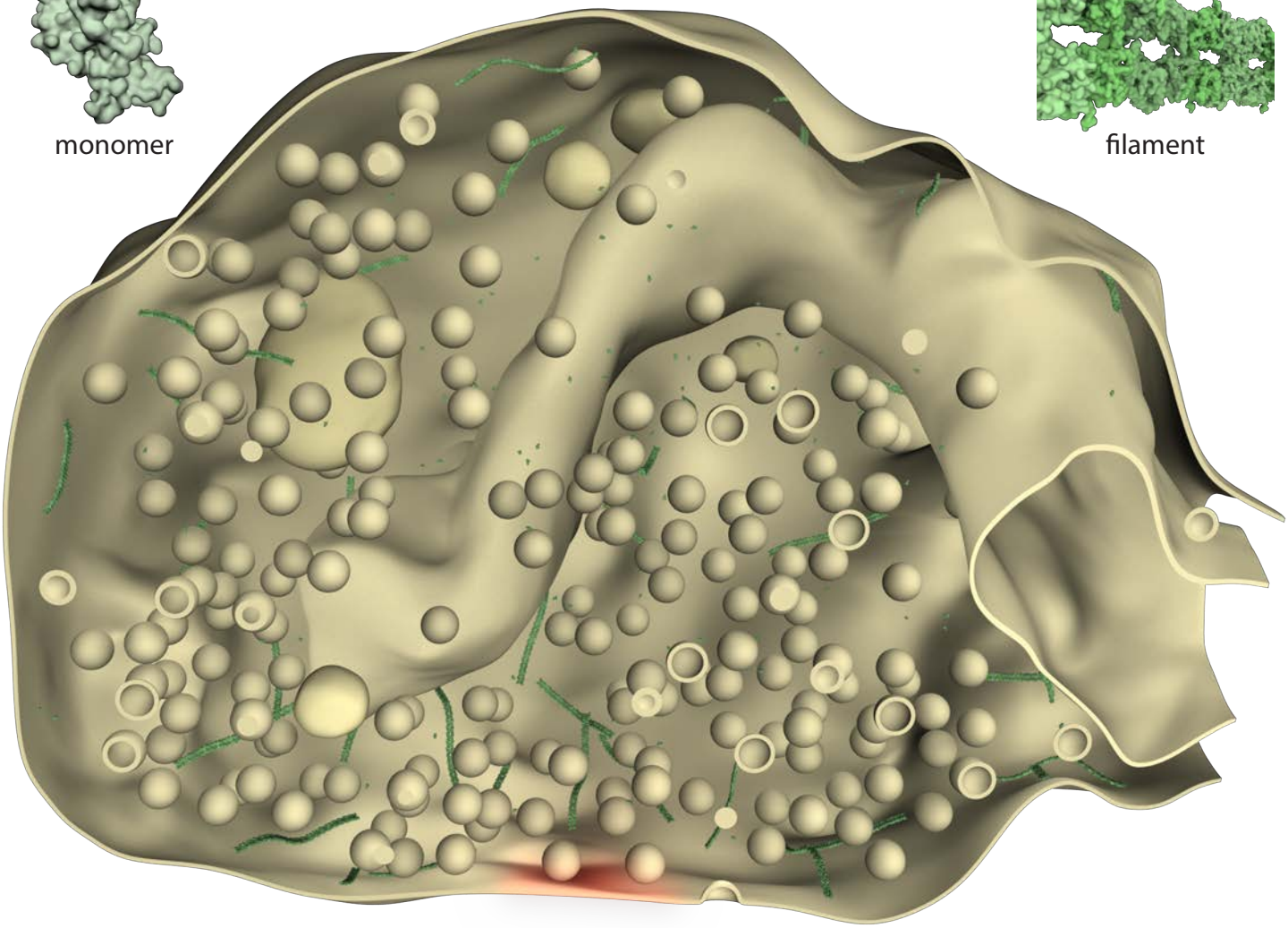
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Cytoskeleton	0.122	1726.20 ± 64.38	11.53

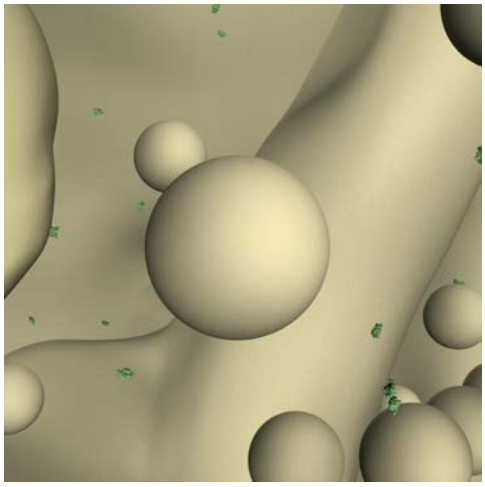


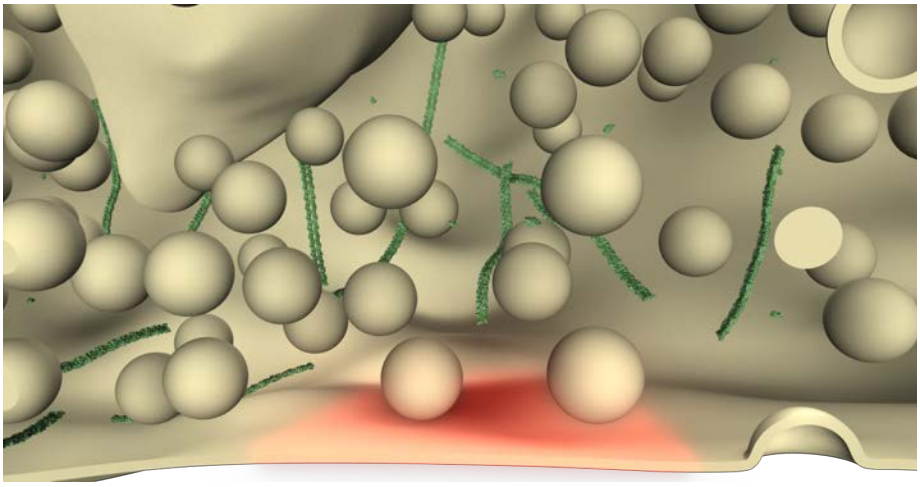
monomer



filament



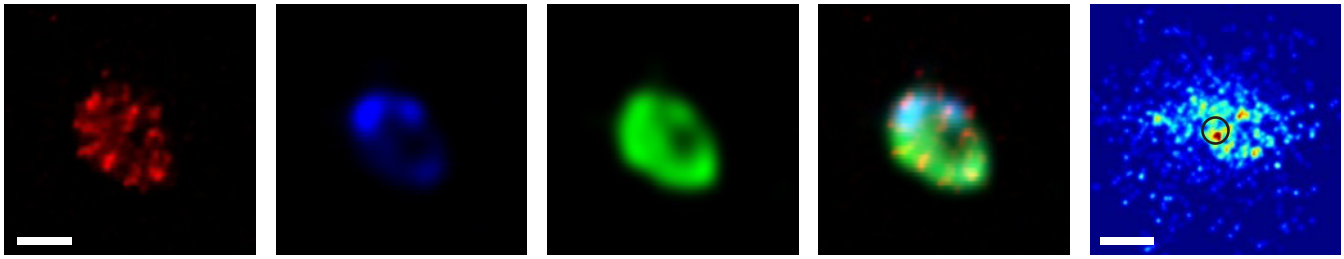




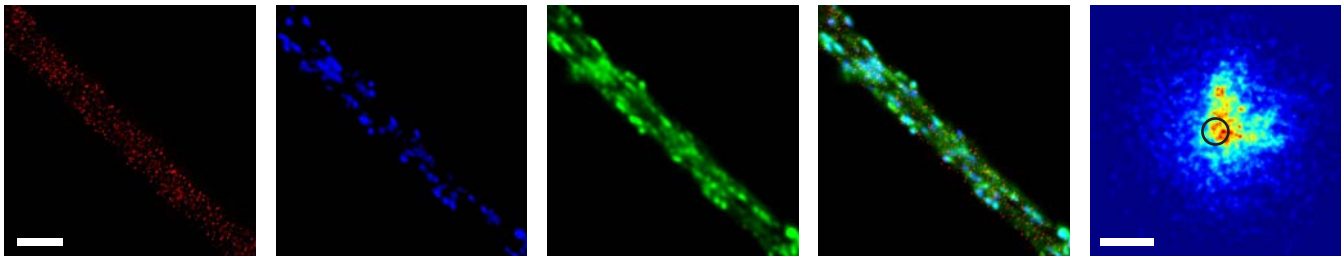
SGIP1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.431	3037.04 ± 142.50	20.28

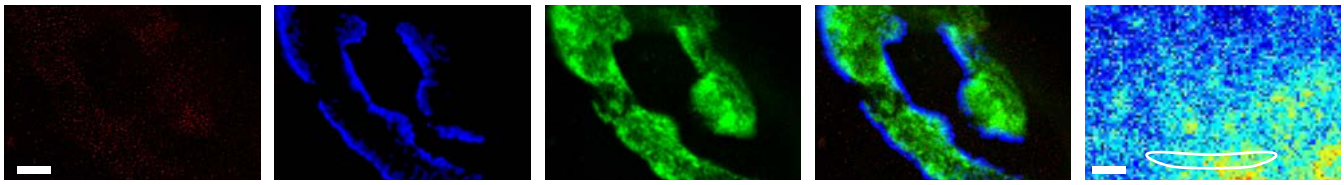
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

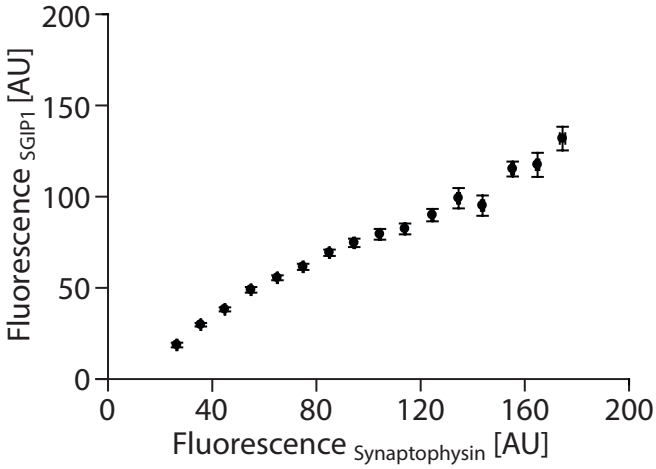


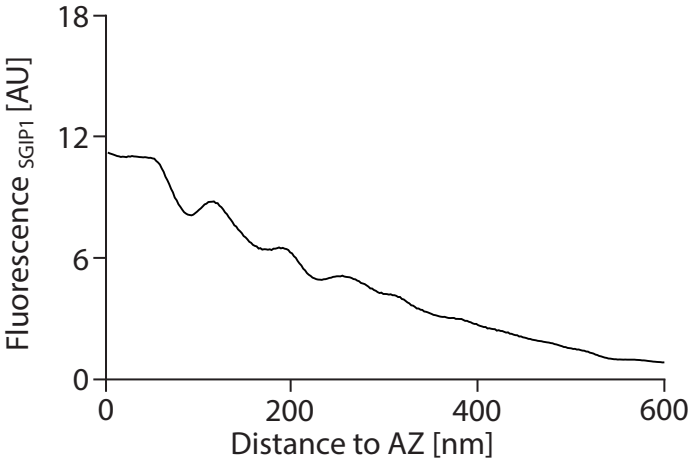
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for SGIP1):

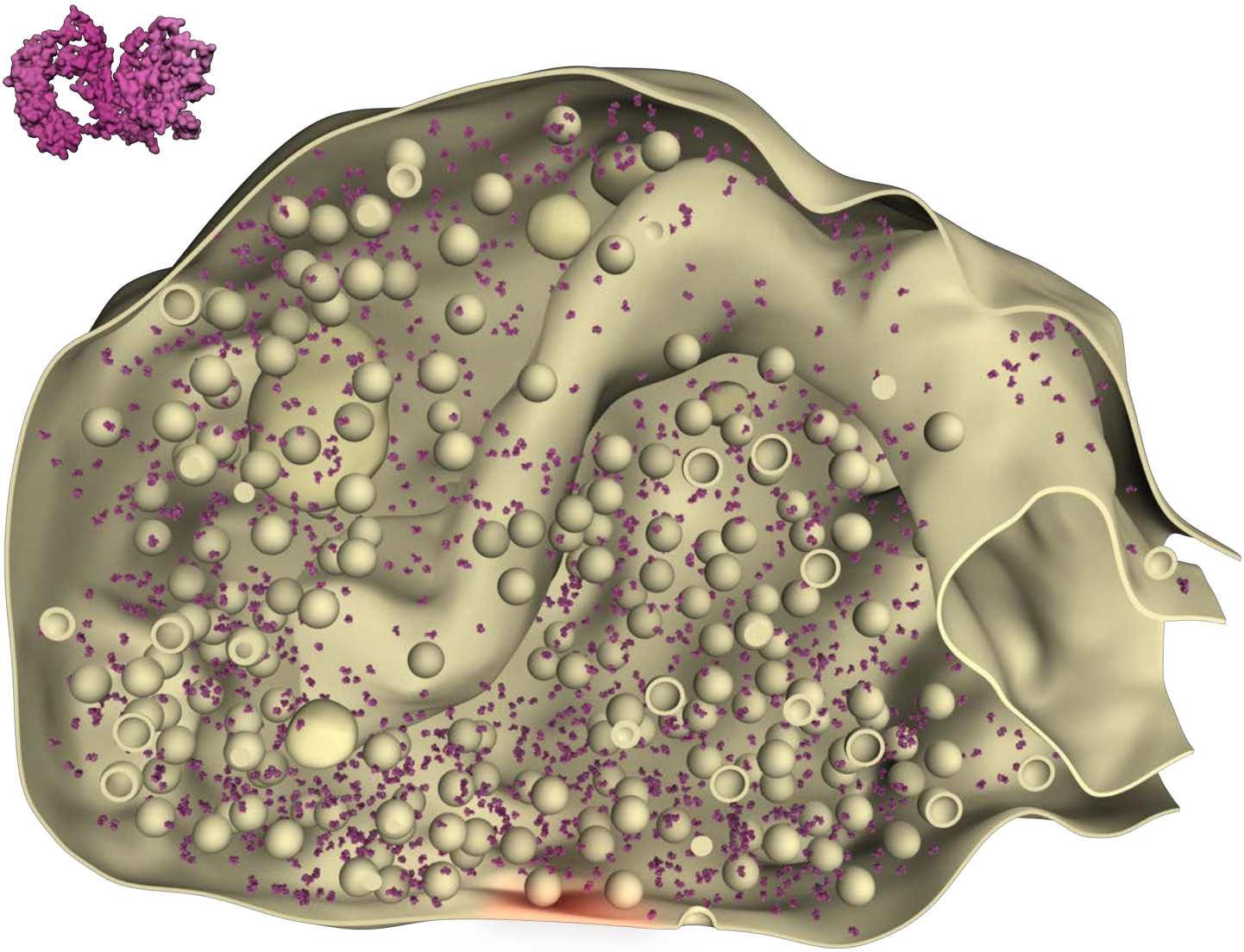
Immunoblots - Abgent (San Diego, CA) AP9556b
Slice/synaptosome stainings - Abgent (San Diego, CA) AP9556b
HC stainings - Abgent (San Diego, CA) AP9556b
NMJ stainings - Abgent (San Diego, CA) AP9556b

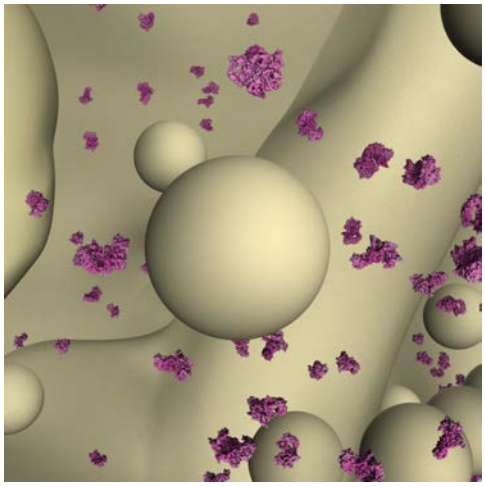
References:

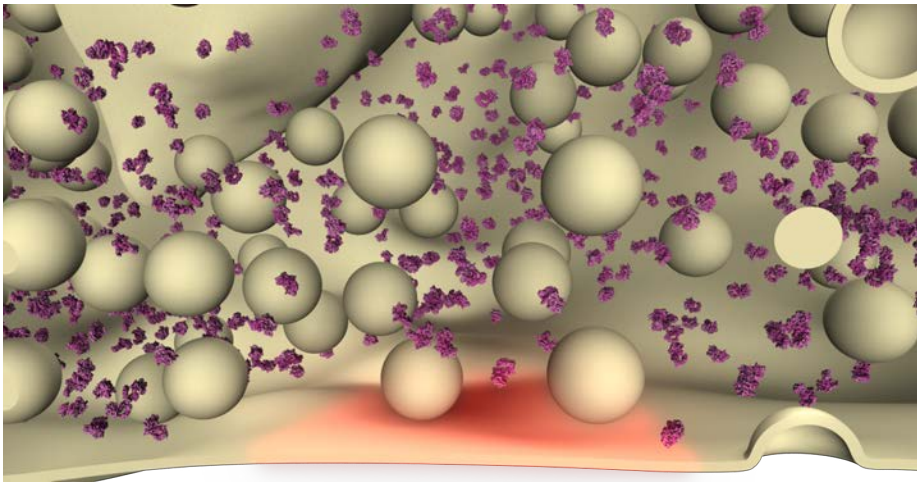
PDB-Identifier (structural information): 1i31, 3g9h.
Trevaskis, J., et al. (2005). Endocrinology 146, 3757-64.
Uezu, A., et al. (2007). J Biol Chem 282, 26481-9.

SGIP1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.431	3037.04 ± 142.50	20.28



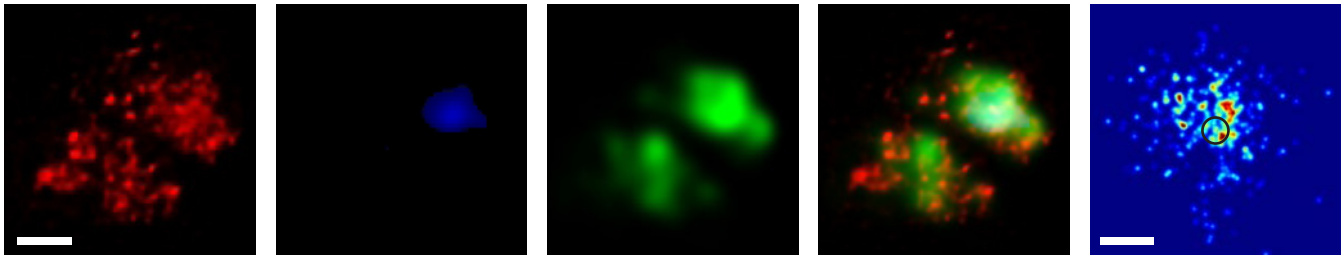




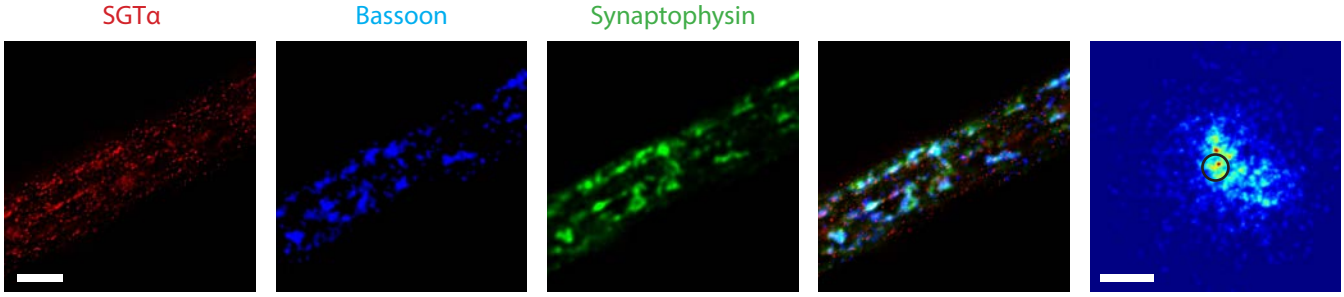
SGTα

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Signaling	0.0056	98.06 ± 11.19	0.65

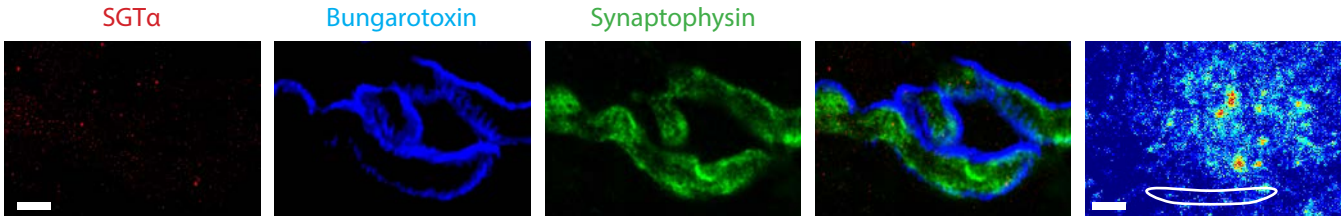
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

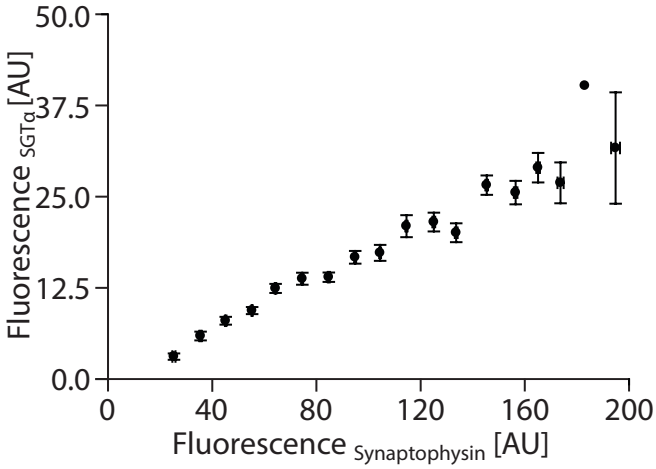


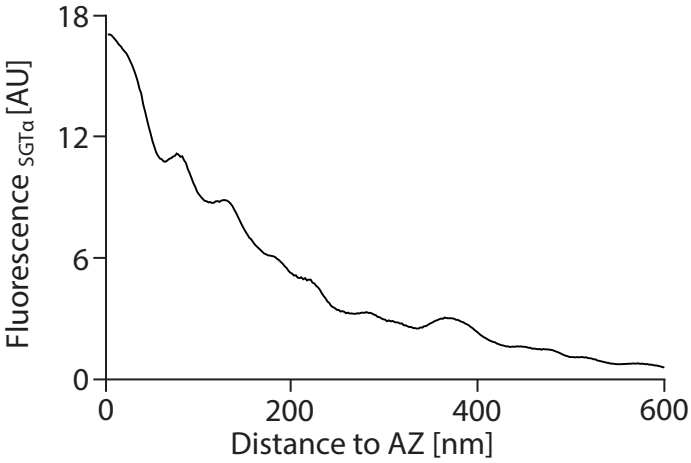
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for SGTα):

Immunoblots - not applicable

Synaptosome stainings - Novus Biologicals (Littleton, Colorado, USA), H00006449-M06

HC stainings - Novus Biologicals (Littleton, Colorado, USA), H00006449-M06

NMJ stainings - Abcam (Cambridge, England), ab96571

References:

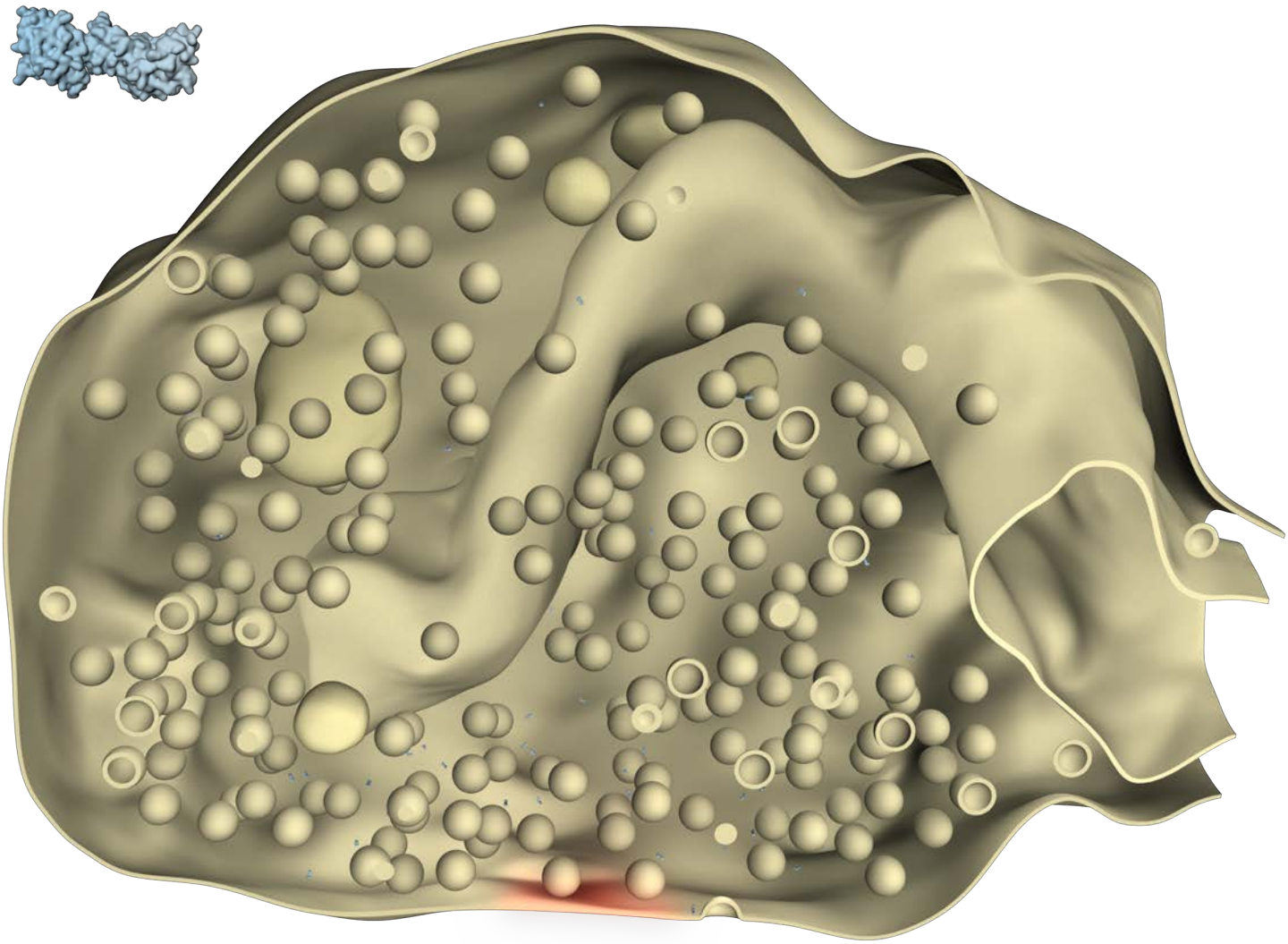
PDB-Identifier (structural information): 2vyi.

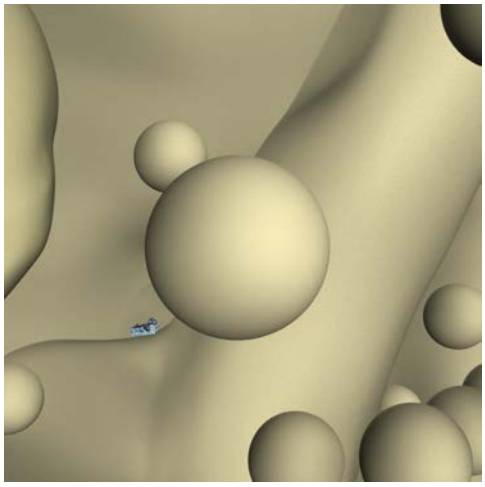
Sharma, M., et al. (2011). Nat Cell Biol 13, 30-9.

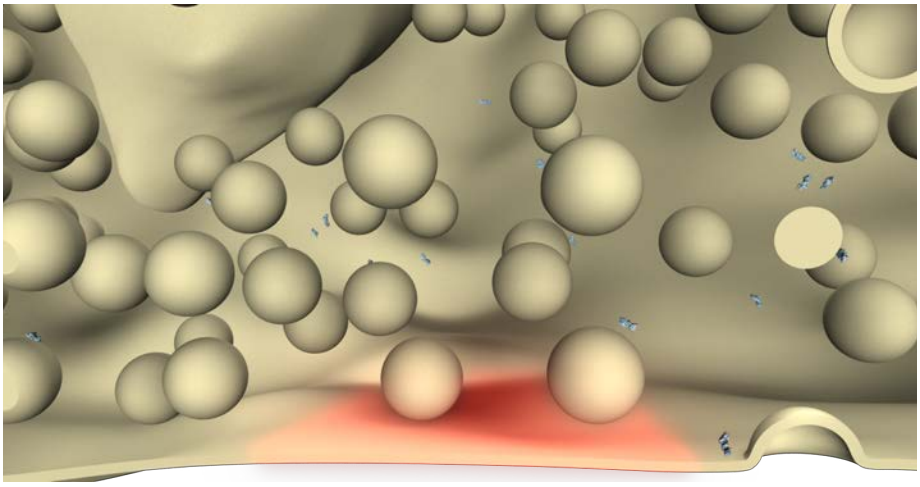
Rizo, J. and Südhof T. C. (2012). Annu Rev Cell Dev Biol 28, 279-308.

SGTα

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Signaling	0.0056	98.06 ± 11.19	0.65



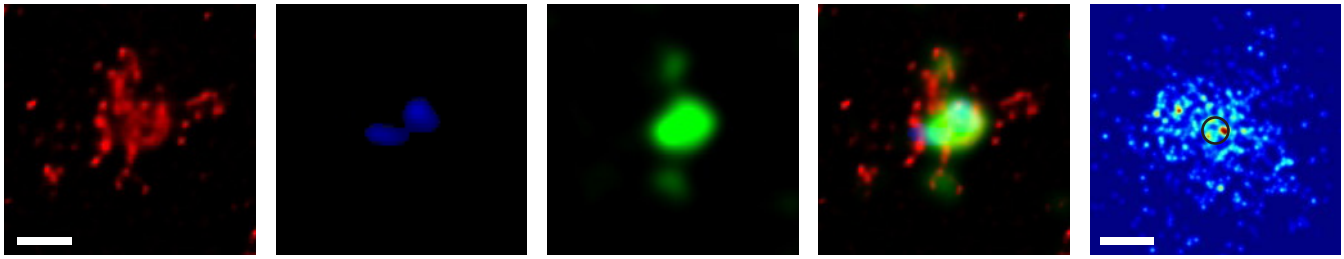




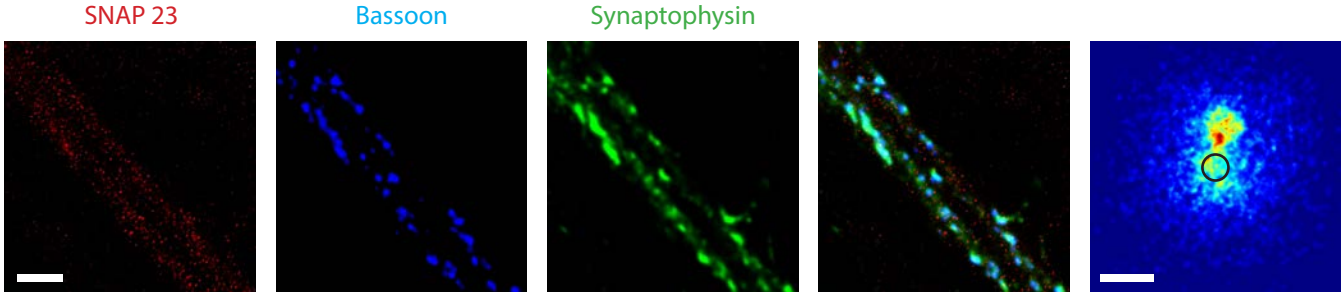
SNAP 23

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.010	265.61 ± 17.75	1.77

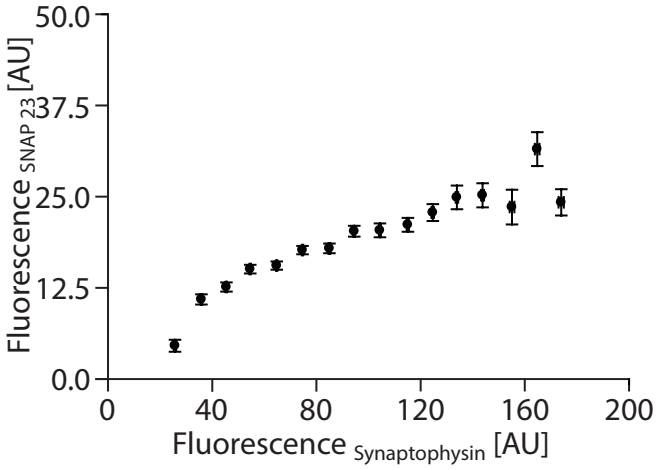
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

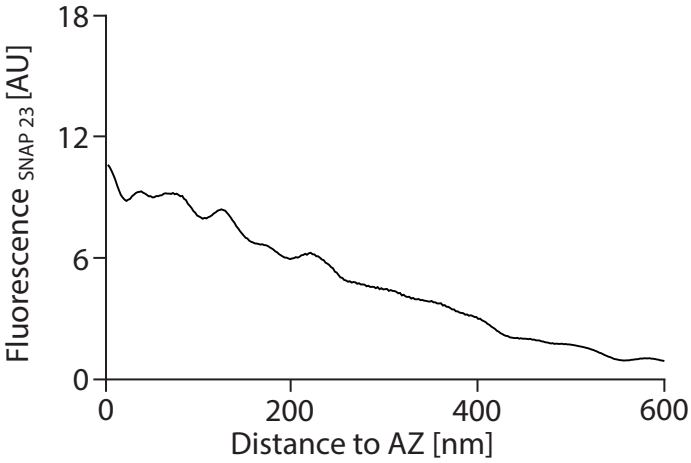


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for SNAP 23):

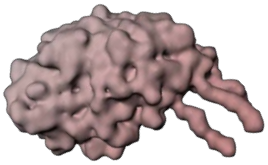
Immunoblots - Synaptic Systems (Göttingen, Germany), 111 202
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 111 202
HC stainings - Synaptic Systems (Göttingen, Germany), 111 202
NMJ stainings - Synaptic Systems (Göttingen, Germany), 111 202

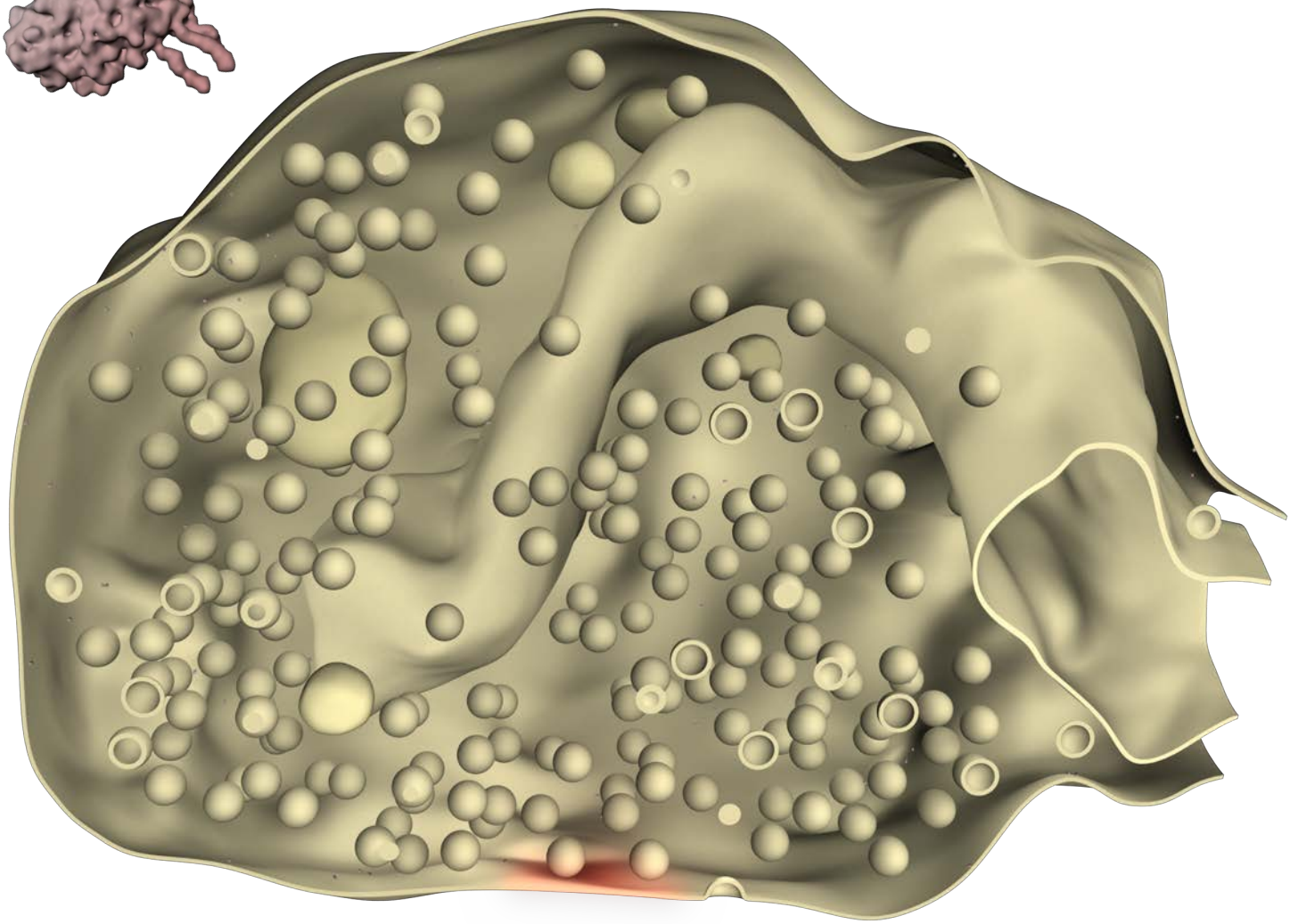
References:

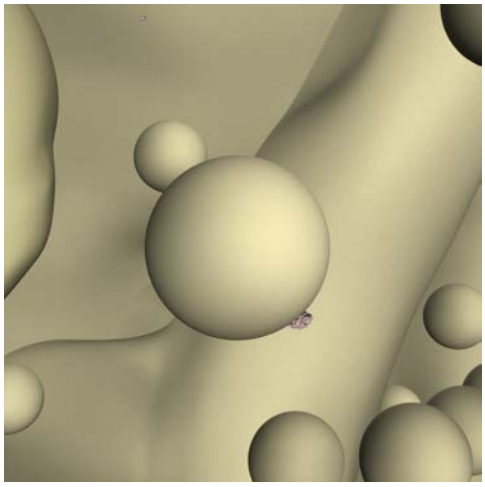
PDB-Identifier (structural information): not available; assembled from individual domains.
Jahn, R., and Scheller, R.H. (2006). Nat Rev Mol Cell Biol 7, 631-43.
Takamori, S., et al. (2006). Cell 127, 831-46.
Sorensen, J.B., et al. (2003). Cell 114, 75-86.

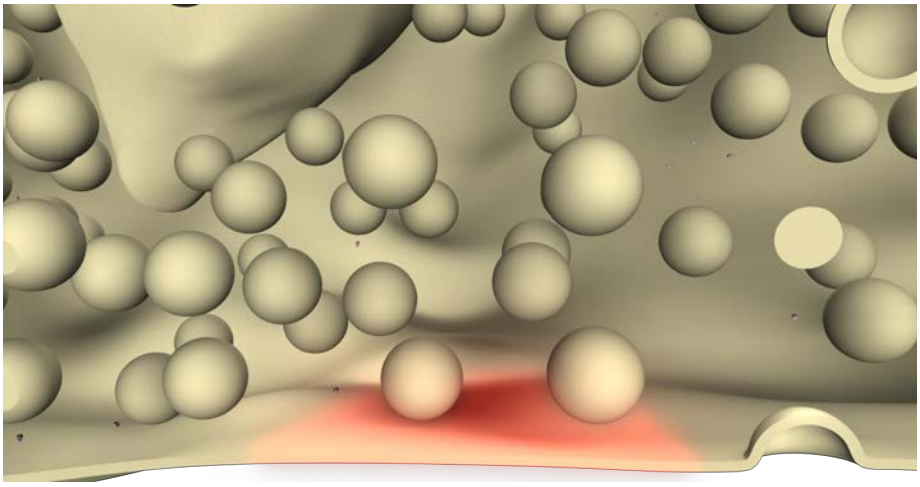
SNAP 23

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.010	265.61 ± 17.75	1.77







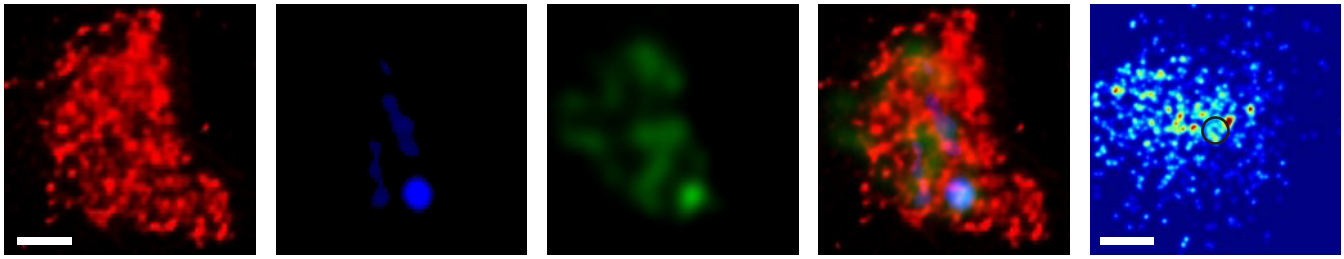


SNAP 25

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	1.027	26686.08 ± 5287.39	178.18

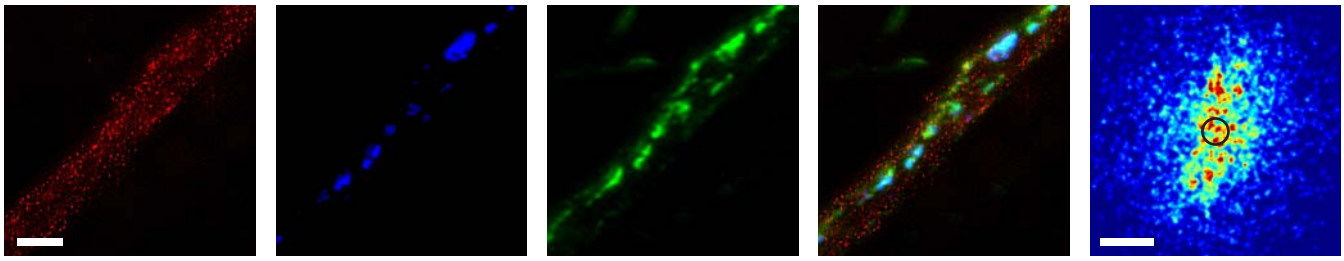
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

SNAP 25 Bassoon Synaptophysin



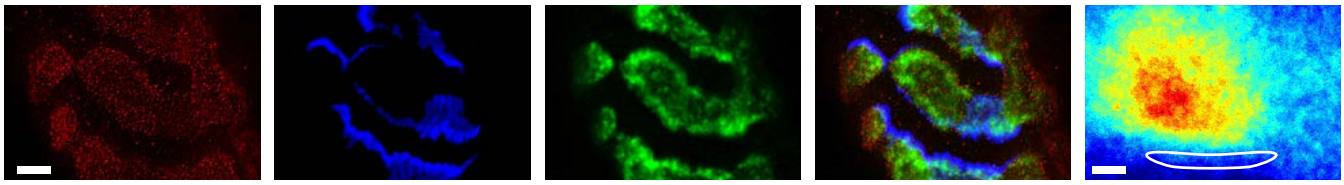
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

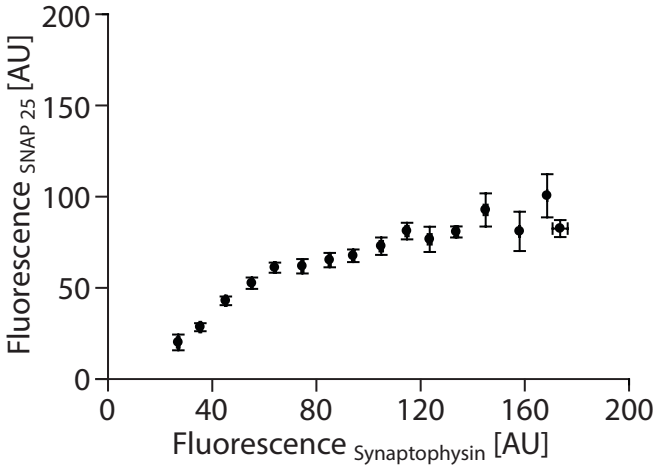
SNAP 25 Bassoon Synaptophysin

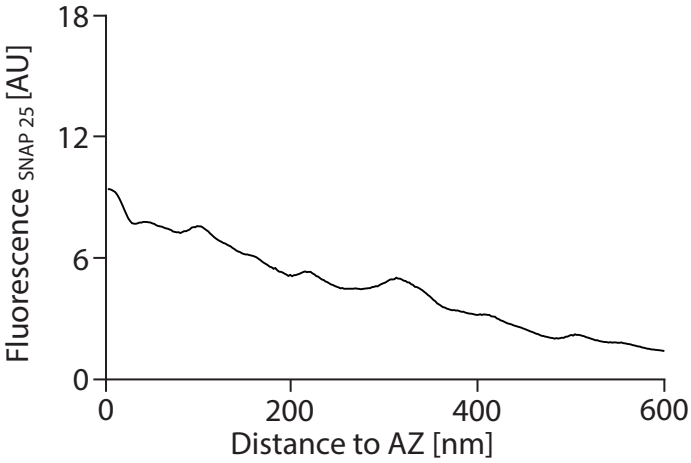


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

SNAP 25 Bungarotoxin Synaptophysin







Antibodies used (for SNAP 25):

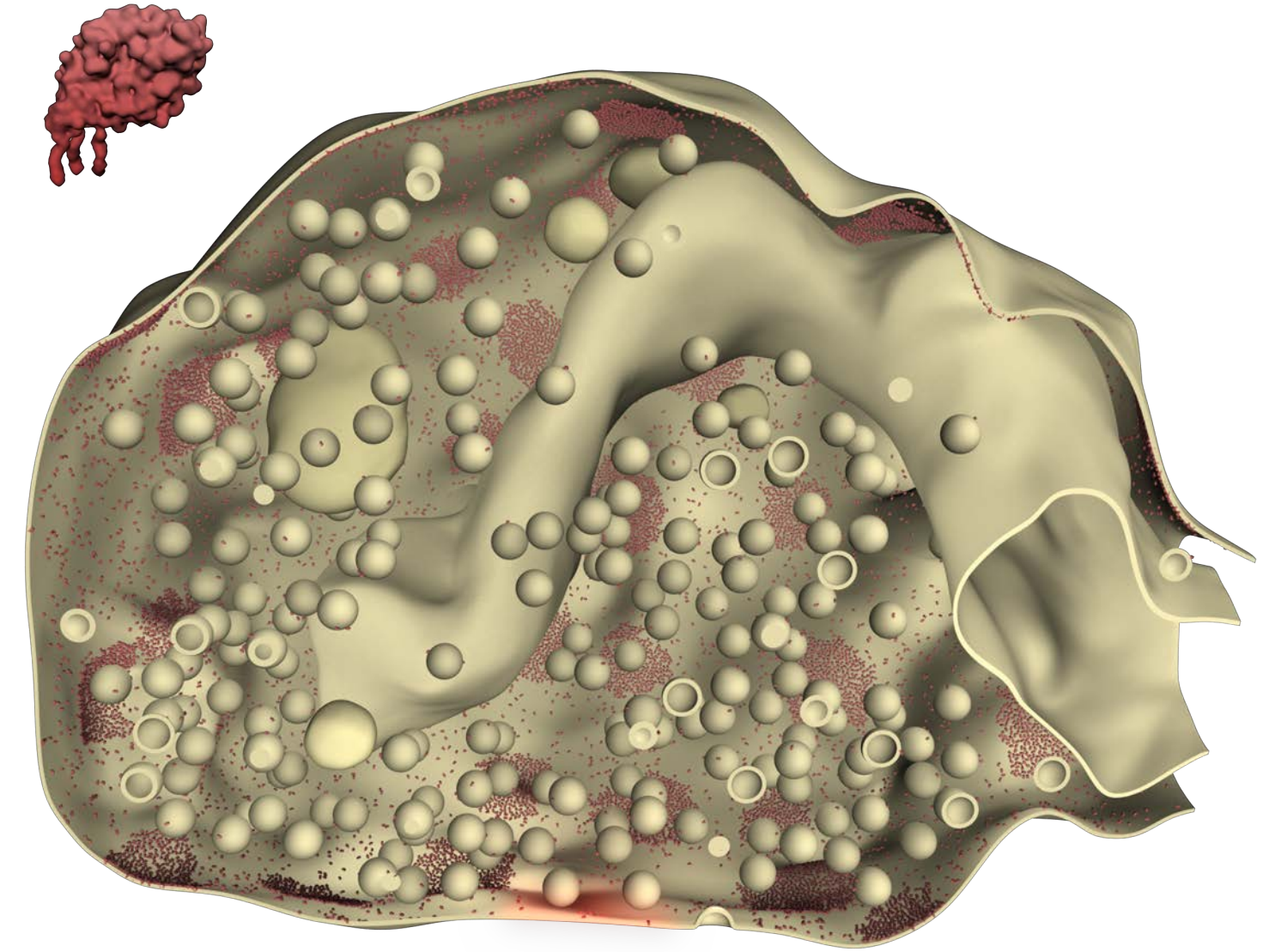
Immunoblots - Synaptic Systems (Göttingen, Germany), 111 011
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 111 002
HC stainings - Synaptic Systems (Göttingen, Germany), 111 011
NMJ stainings - Synaptic Systems (Göttingen, Germany), 111 002

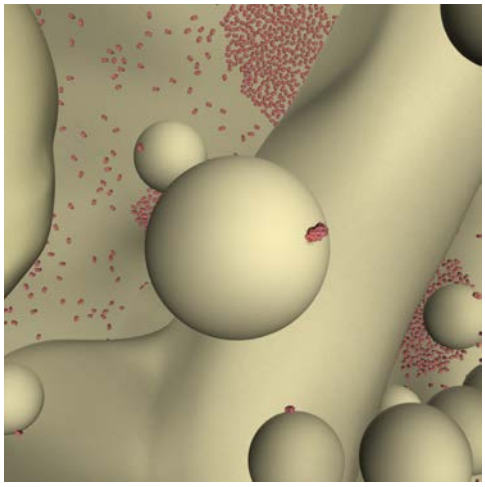
References:

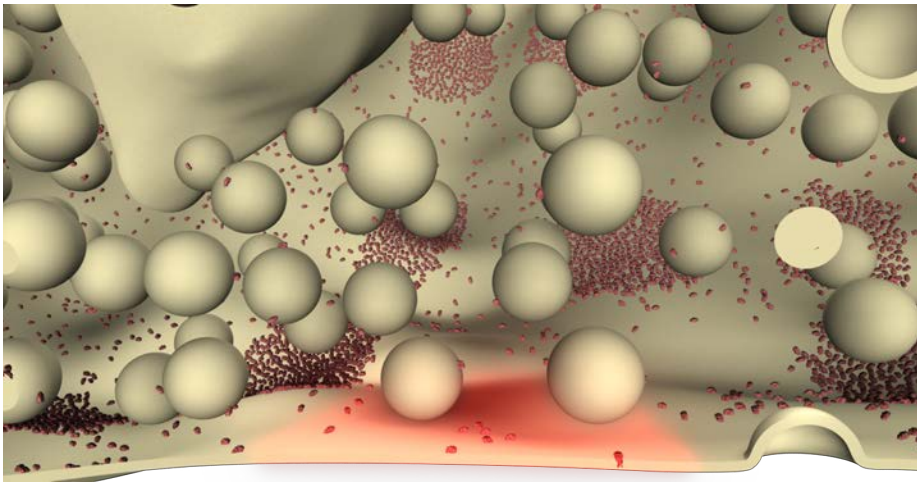
PDB-Identifier (structural information): assembled from individual domains.
Walch-Solimena C., et. al. (1995). J Cell Biol 128, 637-45.
Takamori, S., et al. (2006). Cell 127, 831-46.
Bar-On, D., et. al. (2012). J Biol Chem 287, 27158-67.

SNAP 25

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	1.027	26686.08 ± 5287.39	178.18



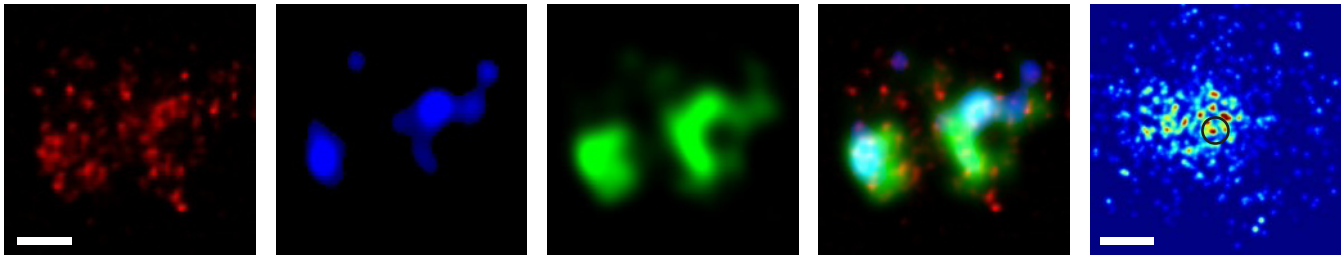




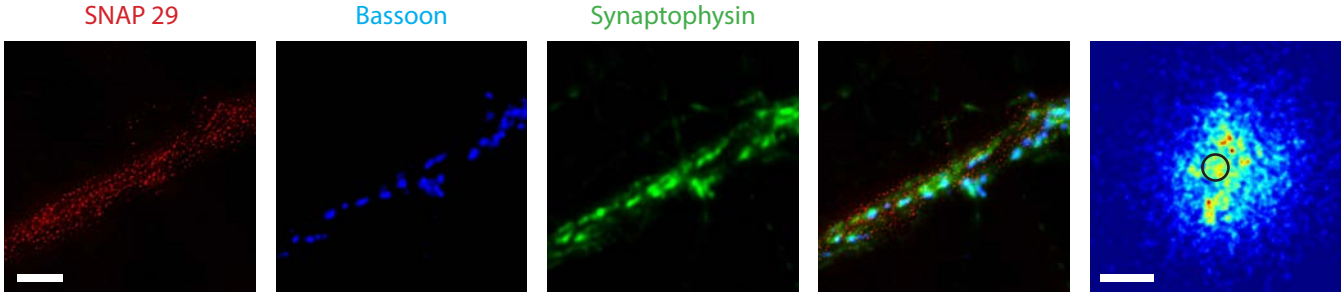
SNAP 29

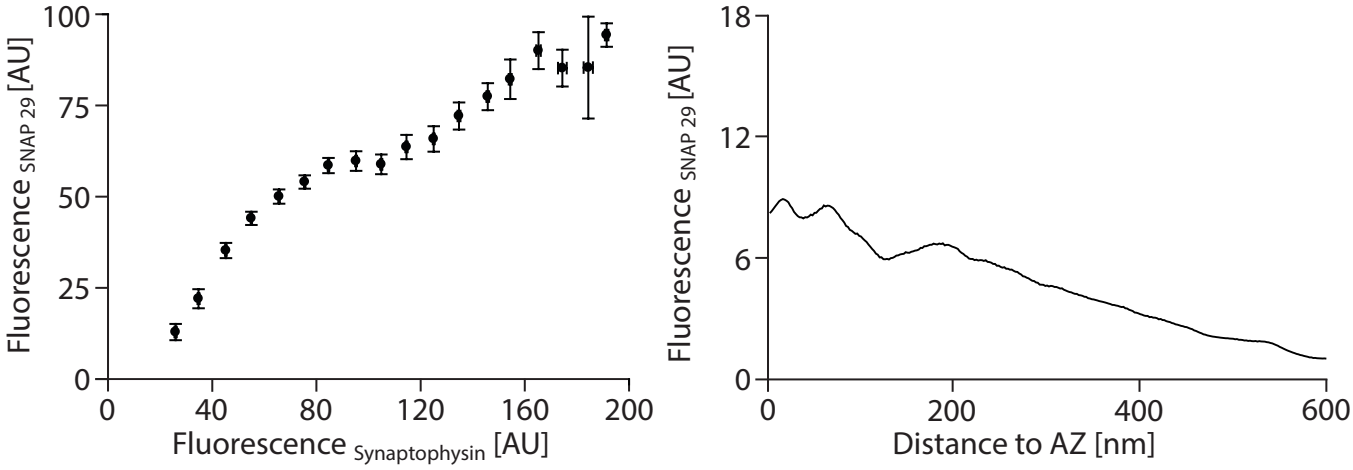
Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.0037	77.47 ± 6.47	0.52

Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)



Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)





Antibodies used (for SNAP 29):

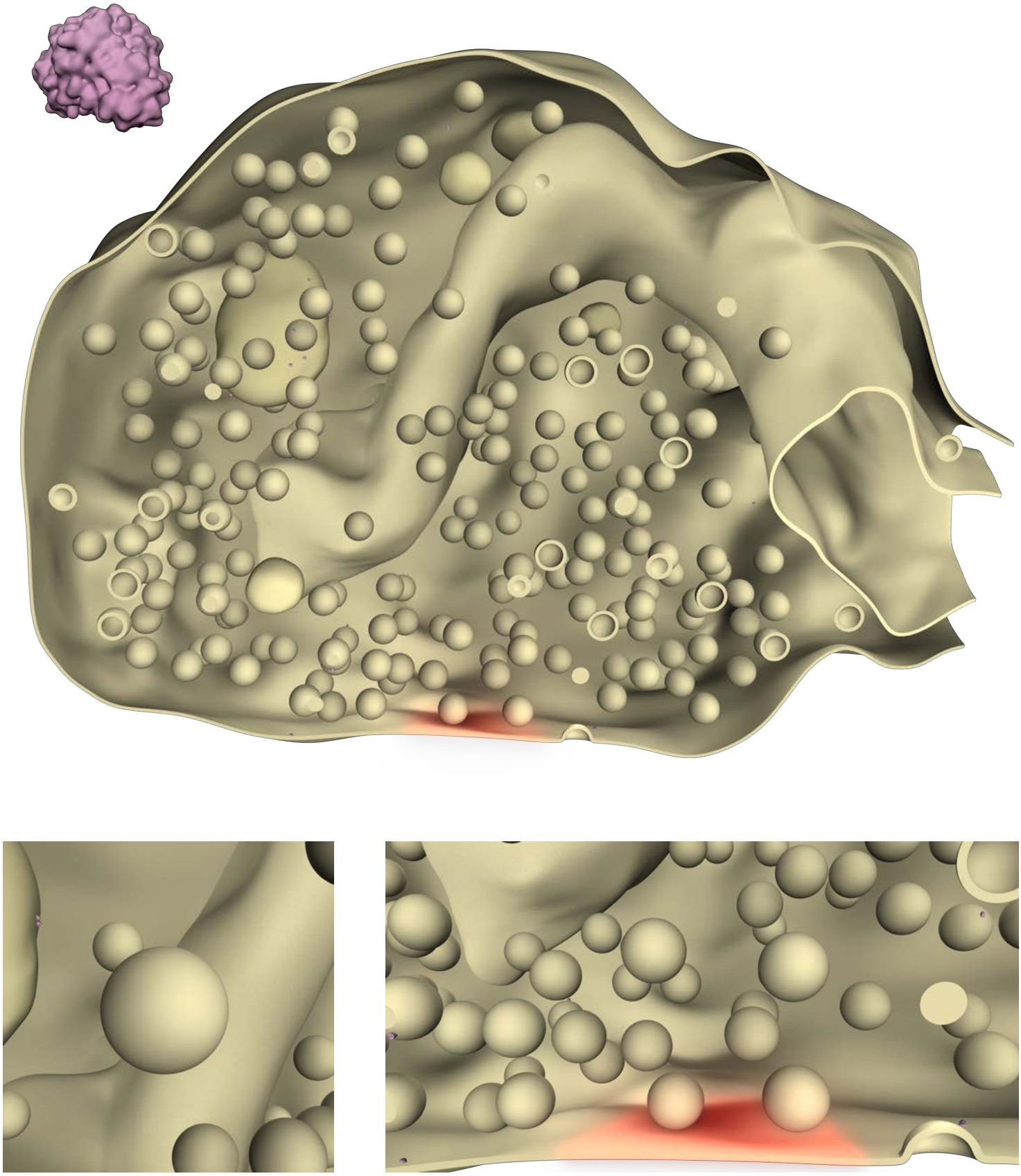
Immunoblots - Synaptic Systems (Göttingen, Germany), 111 302
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 111 302
HC stainings - Abcam (Cambridge, England), ab68824
NMJ stainings - not applicable

References:

PDB-Identifier (structural information): not available; assembled from individual domains.
Peng, J., et al. (2004). J Biol Chem 279, 21003-11.
Takamori, S., et al. (2006). Cell 127, 831-846.

SNAP 29

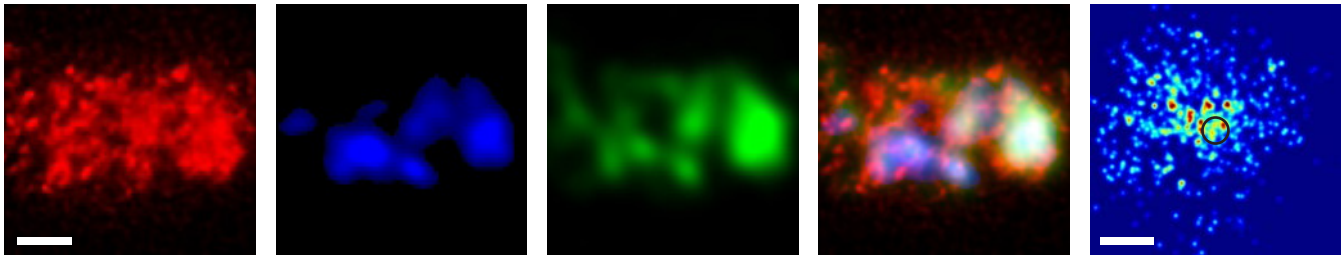
Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.0037	77.47 ± 6.74	0.52



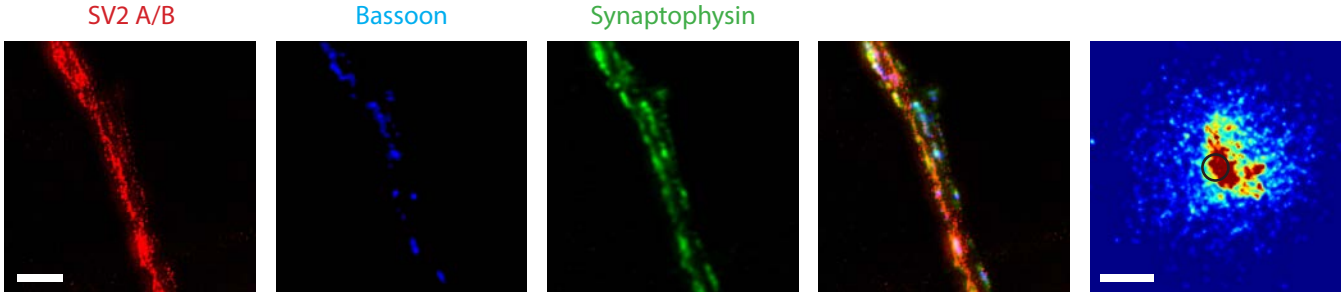
SV2 A/B

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Vesicular	0.618	4616.65 ± 128.17	30.82

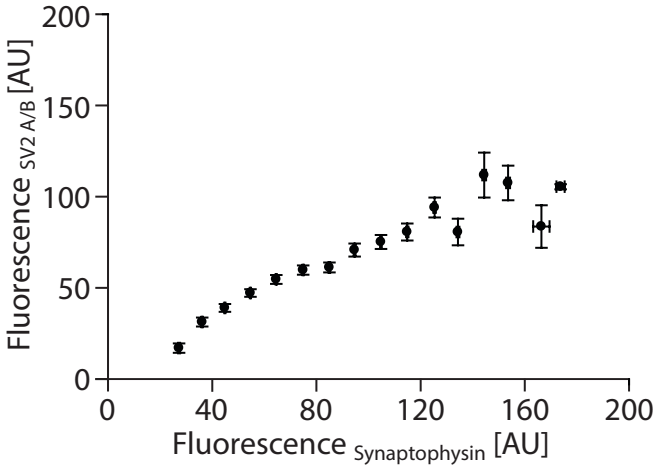
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

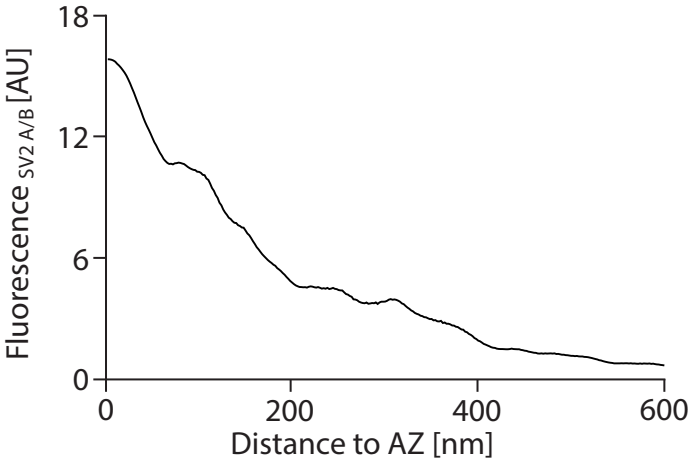


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for SV2 A/B):

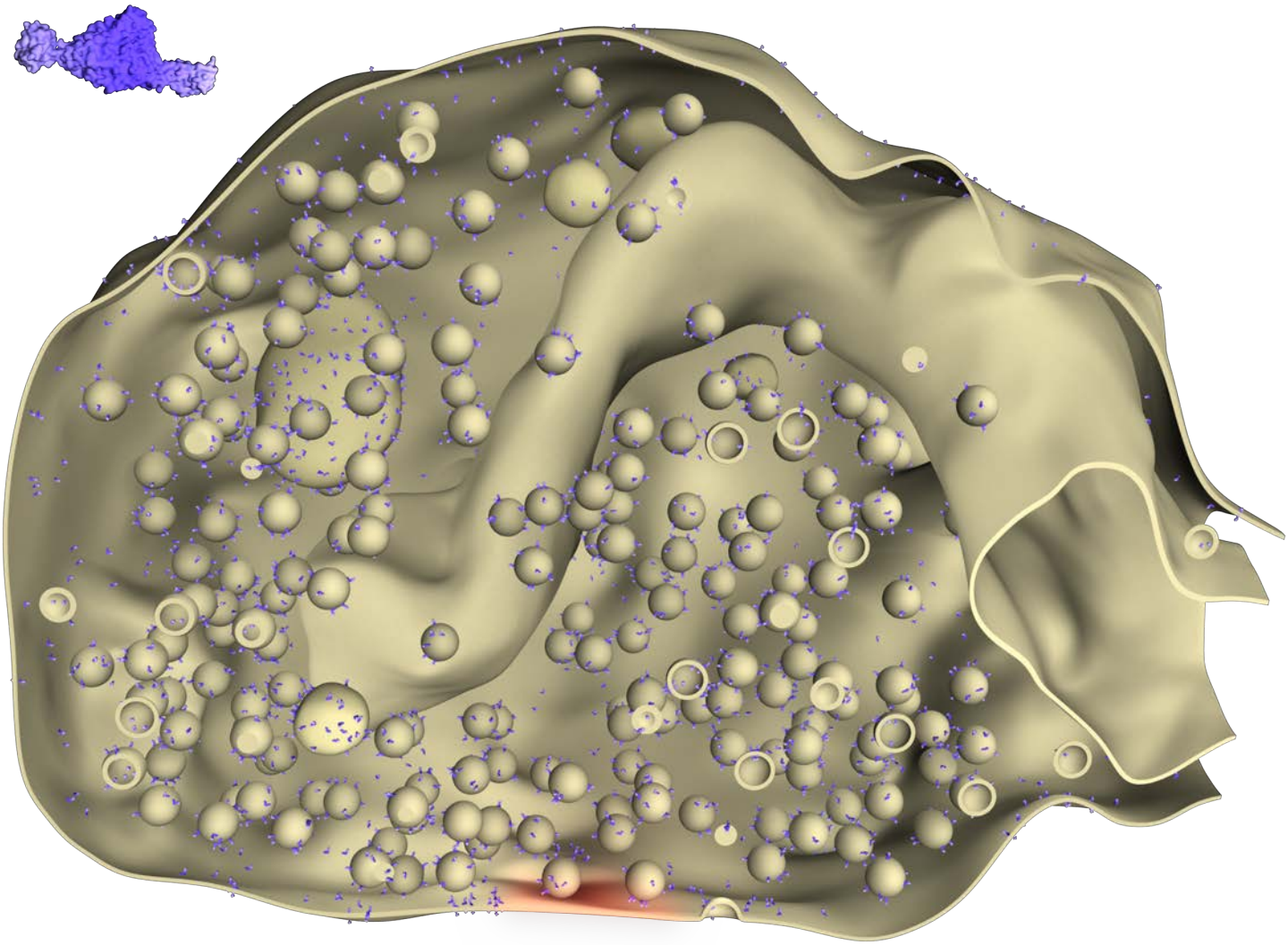
Immunoblots - Reinhard Jahn (MPI-BPC, Göttingen, Germany)
Synaptosome stainings - Reinhard Jahn (MPI-bpc, Göttingen, Germany)
HC stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany)
NMJ stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany)

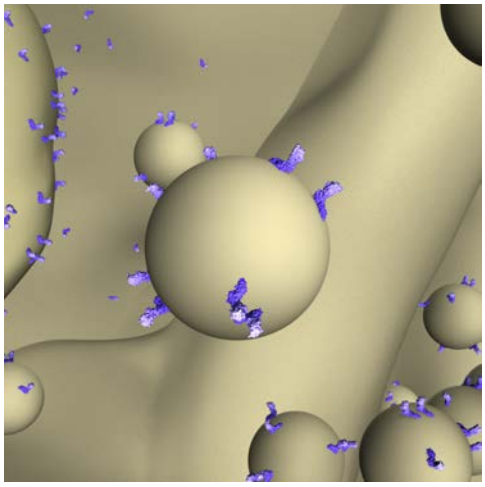
References:

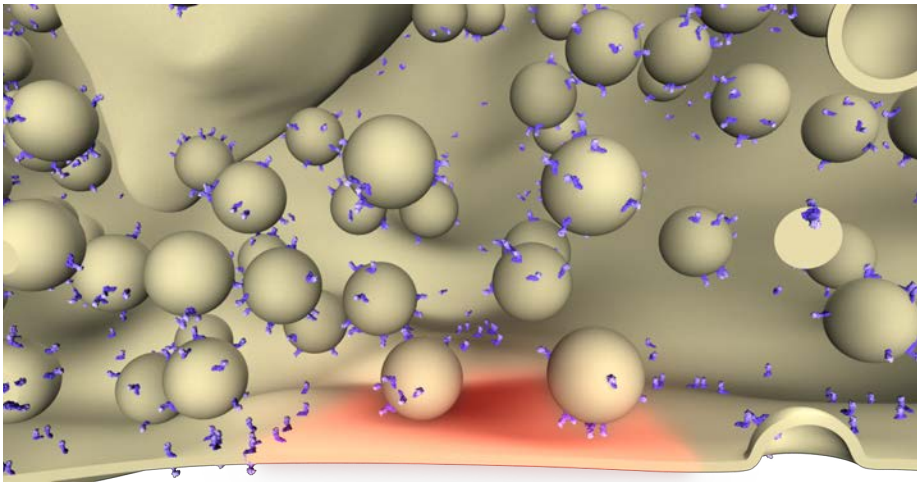
PDB-Identifier (structural information): assembled from individual domains.
Buckley, K., and Kelly, R.B. (1985). J Cell Biol 100, 1284-94.
Bajjalieh, S.M., et al. (1992). Science 257, 1271-3.
Takamori, S., et al. (2006). Cell 127, 831-46.

SV2 A/B

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.618	4615.50 ± 128.95	30.82



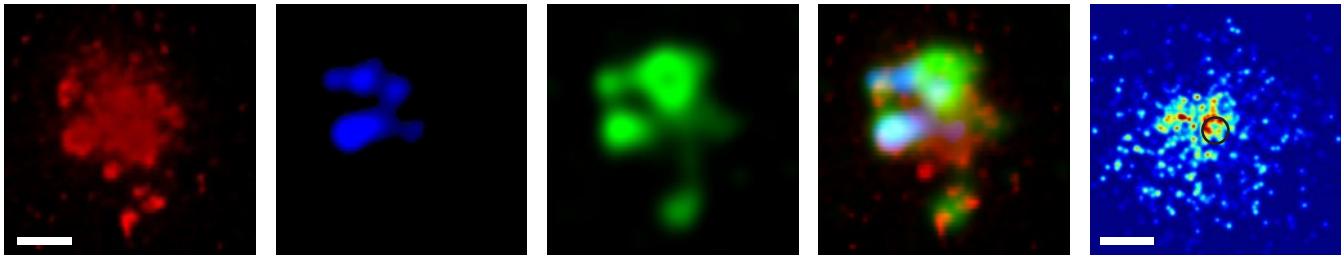




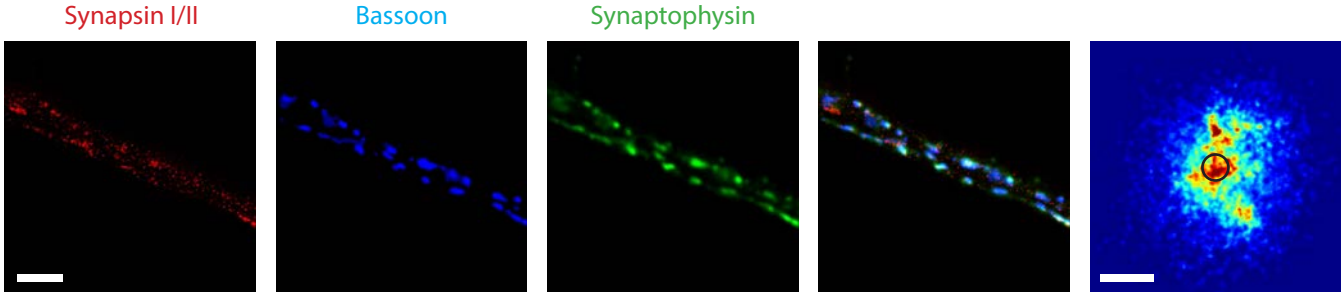
Synapsin I/II

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Tethering	2.524	23422.77 ± 1300.03	156.38

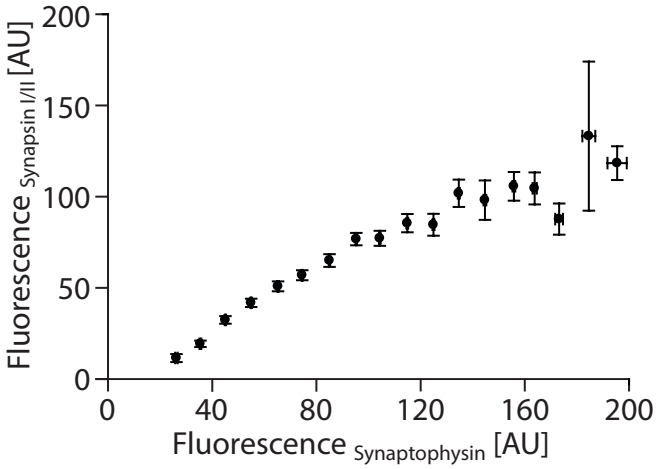
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

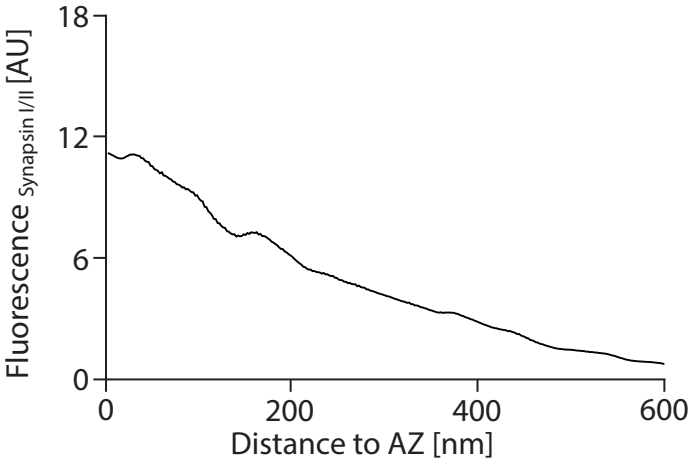


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





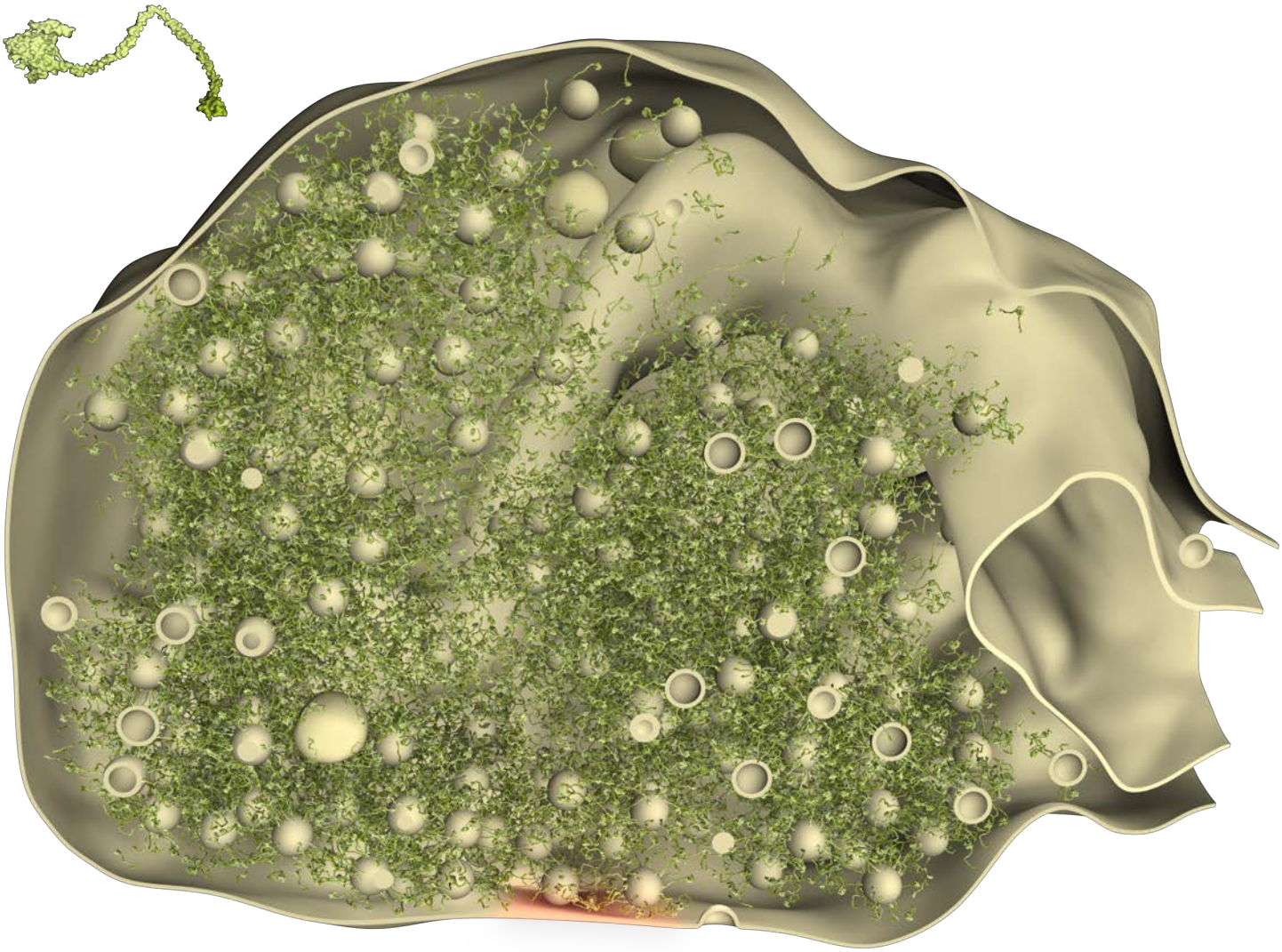
Antibodies used (for Synapsin I/II): Immunoblots - Novus Biologicals (Cambridge, England), H00006854-A01; Cell Signaling (Danvers, MA), 2312
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 106 002
HC stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany)
NMJ stainings - Synaptic Systems (Göttingen, Germany), 106 002

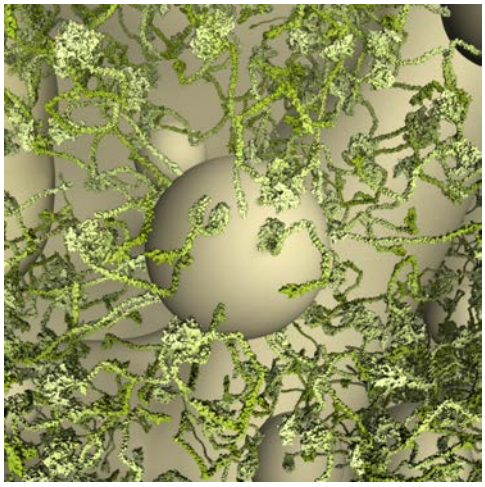
References:

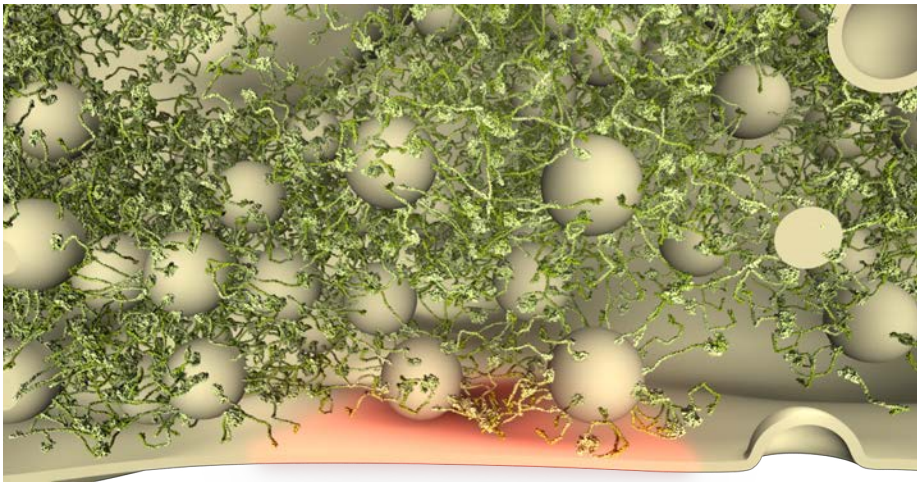
PDB-Identifier (structural information): 1pk8.
Cesca, F., et al. (2010). Prog Neurobiol 91, 313-48.
Siksou, L., et al. (2007). J Neurosci 27, 6868-77.
Hirokawa, N., et al. (1989). J Cell Biol 108, 111-26.
Takamori, S., et al. (2006). Cell 127, 831-46.

Synapsin I/II

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Tethering	2.524	23422.77 ± 1300.03	156.38





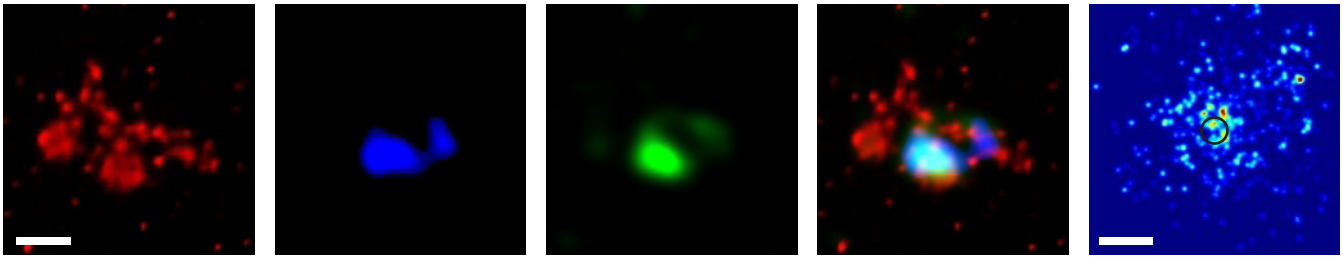


Synaptogyrin 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Vesicular	0.079	1854.80 ± 110.49	12.39

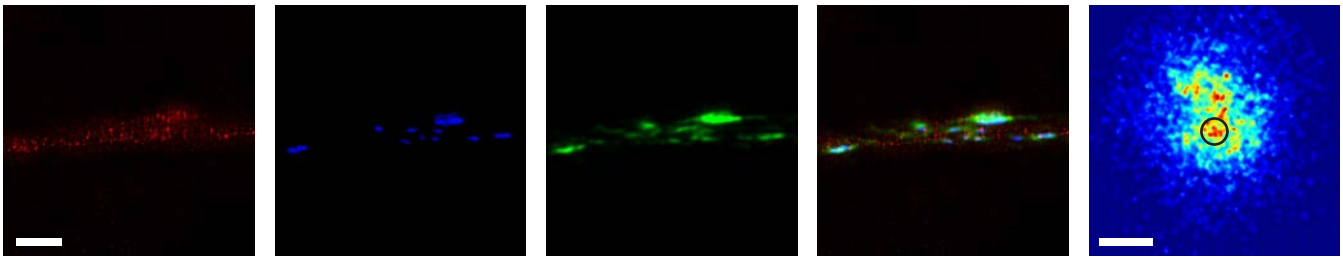
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

Synaptogyrin 1 | Bassoon | Synaptophysin



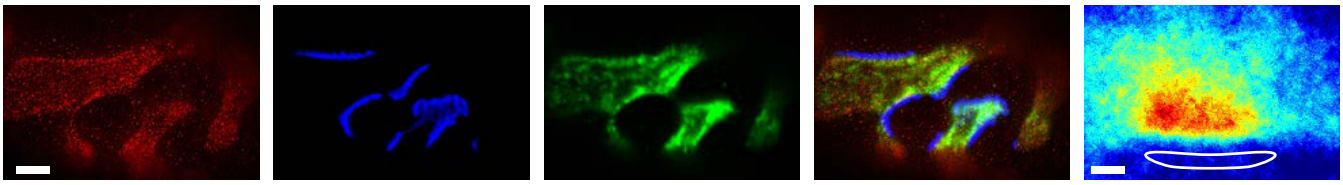
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

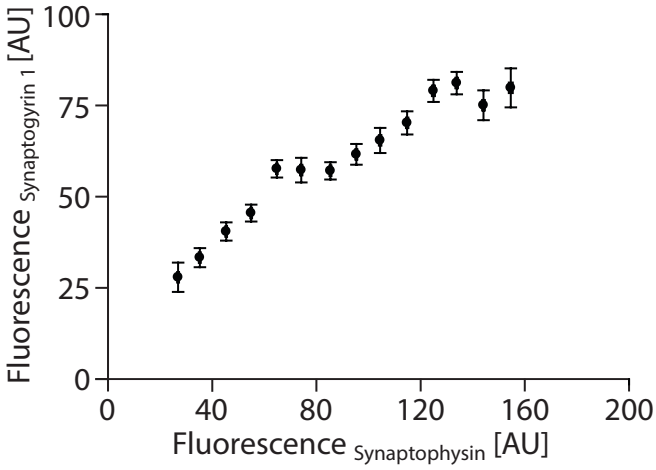
Synaptogyrin 1 | Bassoon | Synaptophysin

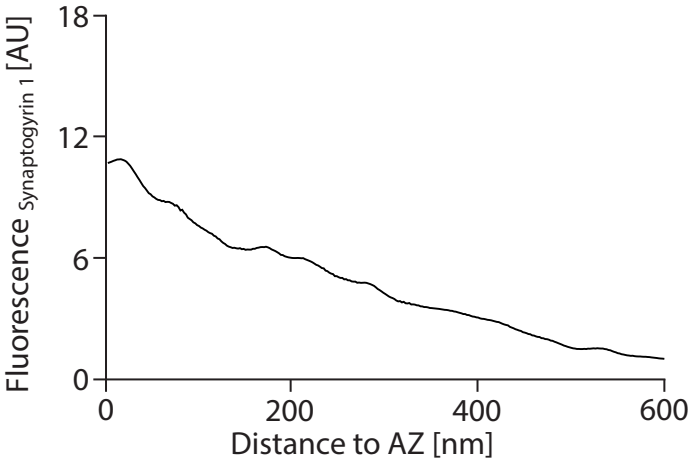


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

Synaptogyrin 1 | Bungarotoxin | Synaptophysin







Antibodies used (for Synaptogyrin 1):

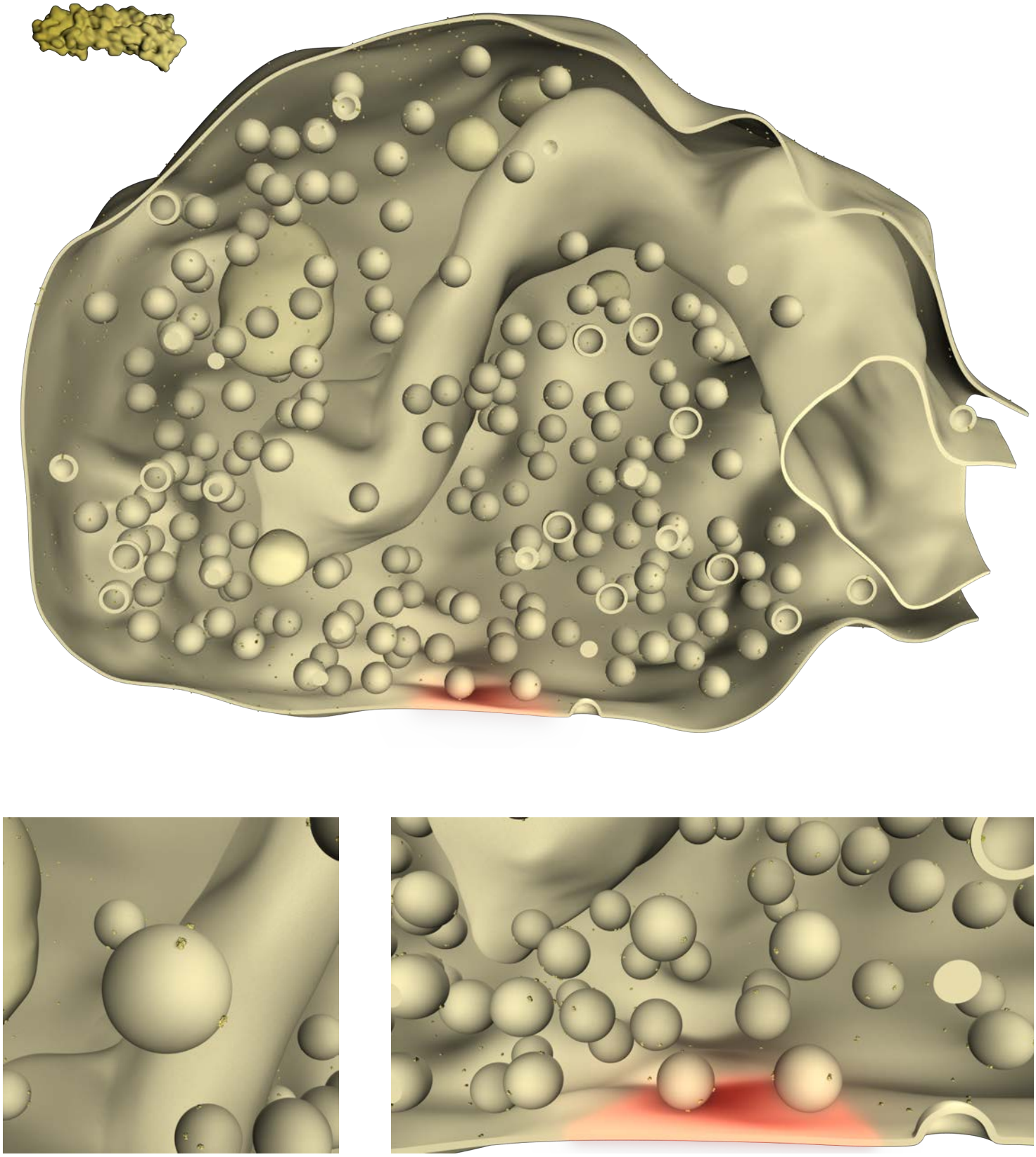
Immunoblots - Novus Biologicals (Cambridge, England), NBP-1-77371
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 103 002
HC stainings - Synaptic Systems (Göttingen, Germany), 103 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 103 002

References:

PDB-Identifier (structural information): not available; assembled from individual domains.
Baumert, M., et al. (1990). J Cell Biol 110, 1285-94.
Jahn, R., et al. (1985). Proc Natl Acad Sci U S A 82, 4127-41.
Takamori, S., et al. (2006). Cell 127, 831-46.

Synaptogyrin 1

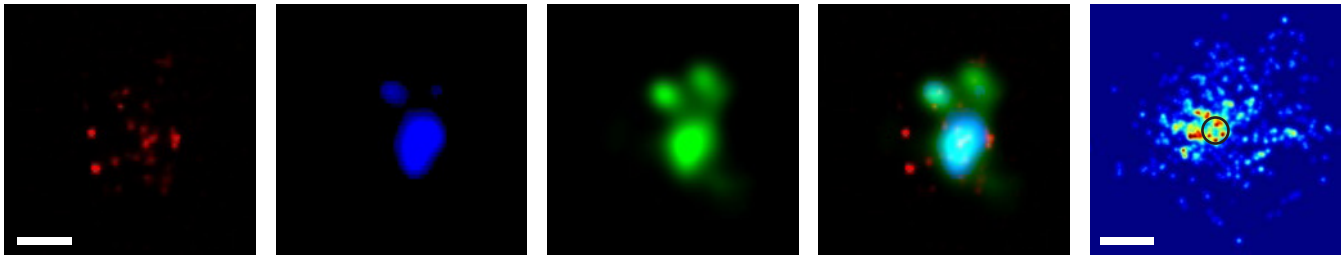
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Vesicular	0.079	1854.80 ± 110.49	12.39



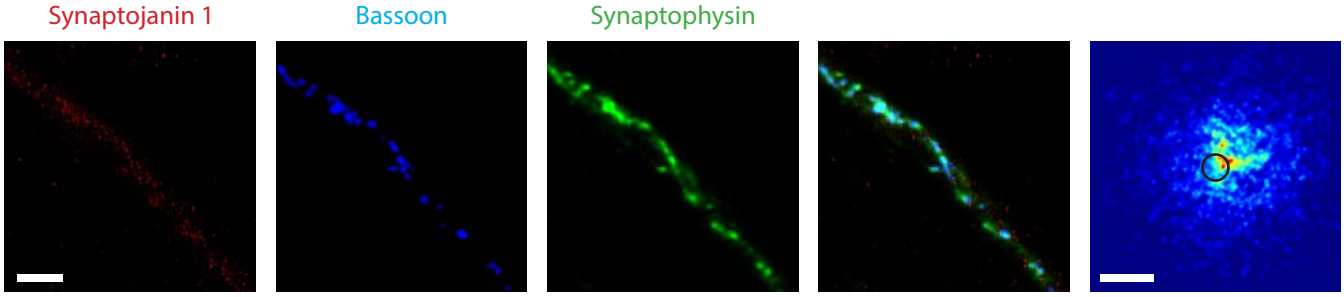
Synaptojanin 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.103	365.61 ± 40.31	2.43

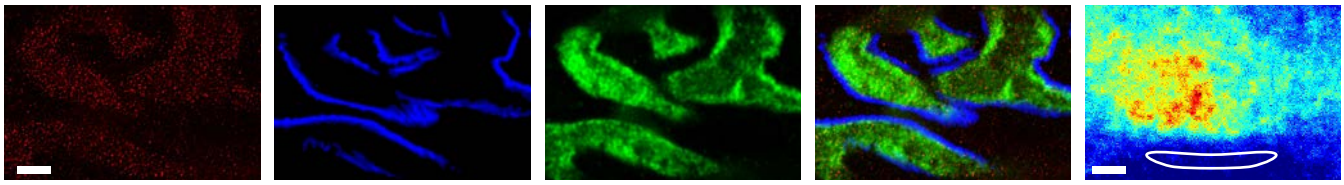
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

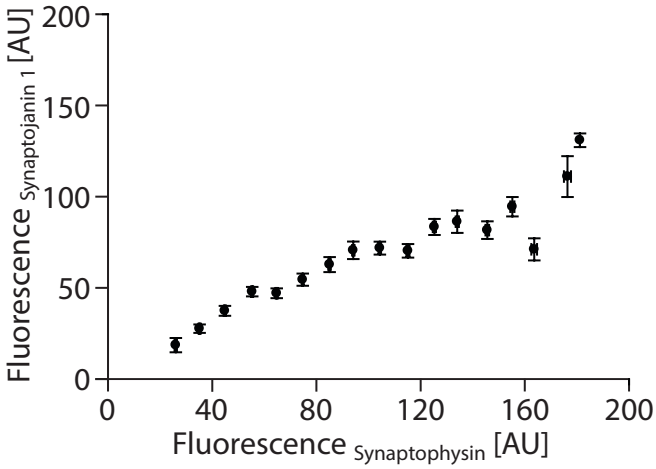


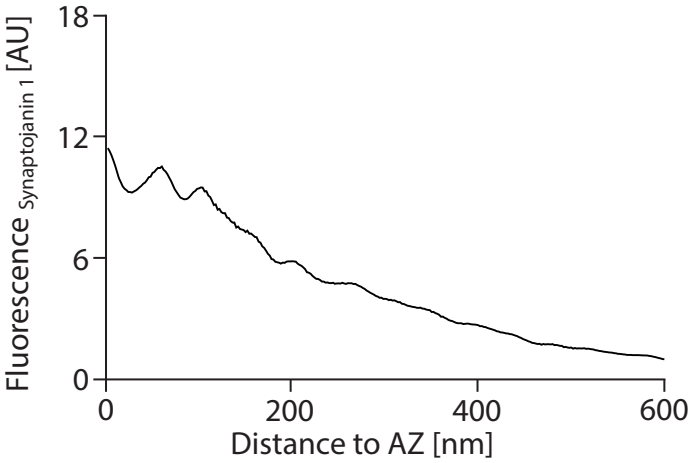
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Synaptojanin 1):

Immunoblots - not applicable

Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 145 003

HC stainings - Synaptic Systems (Göttingen, Germany), 145 003

NMJ stainings - Synaptic Systems (Göttingen, Germany), 145 003

References:

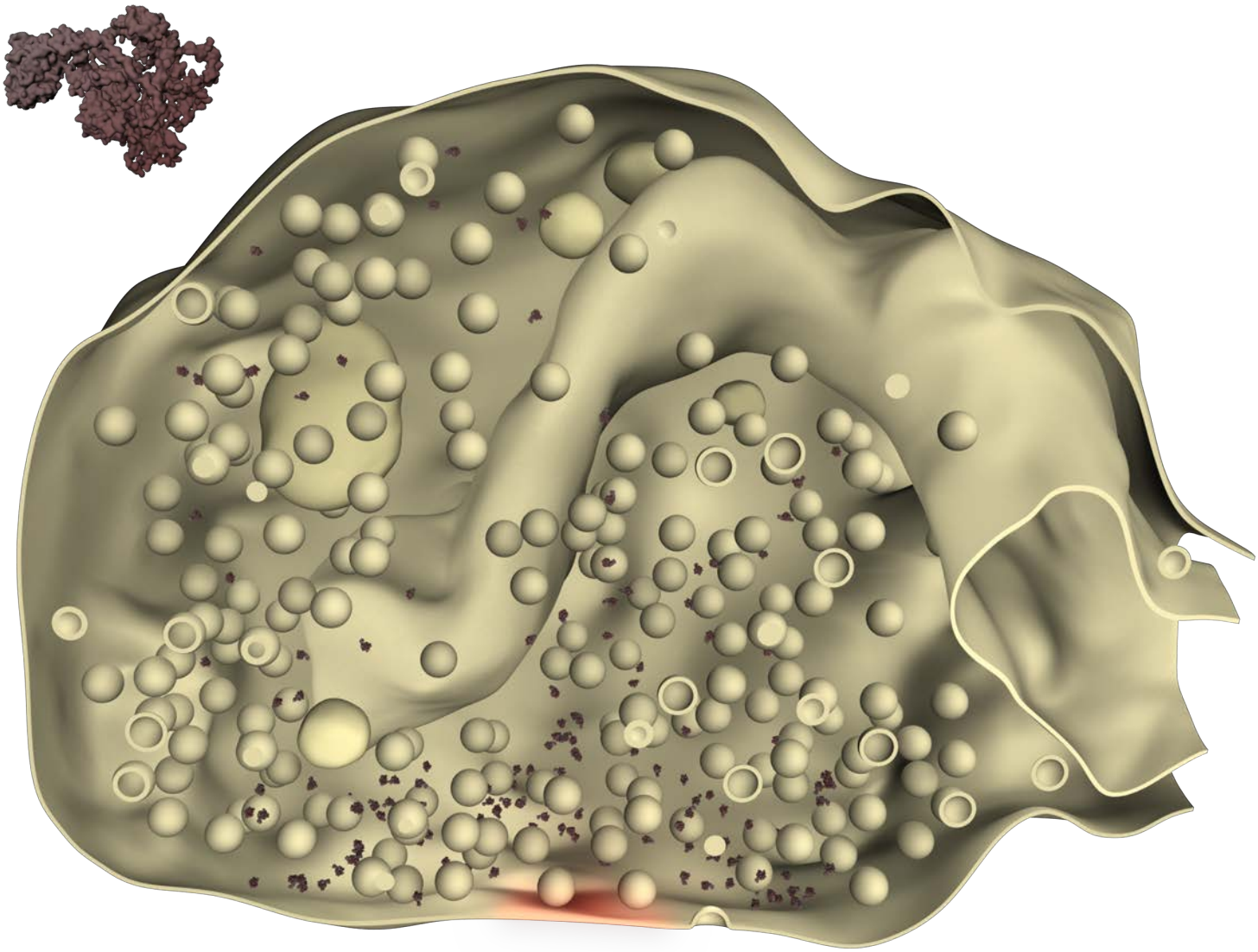
PDB-Identifier (structural information): 3lwt, 1ufw.

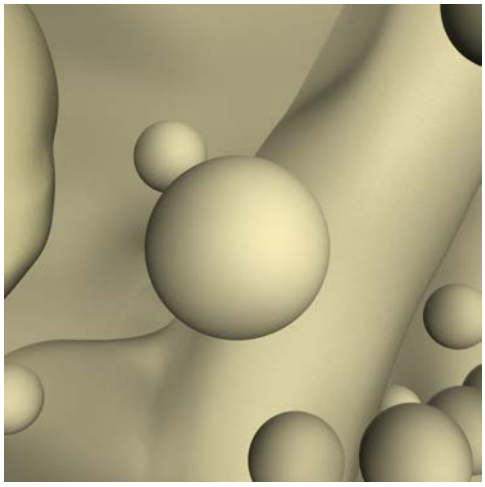
Takamori, S., et al. (2006). Cell 127, 831-846.

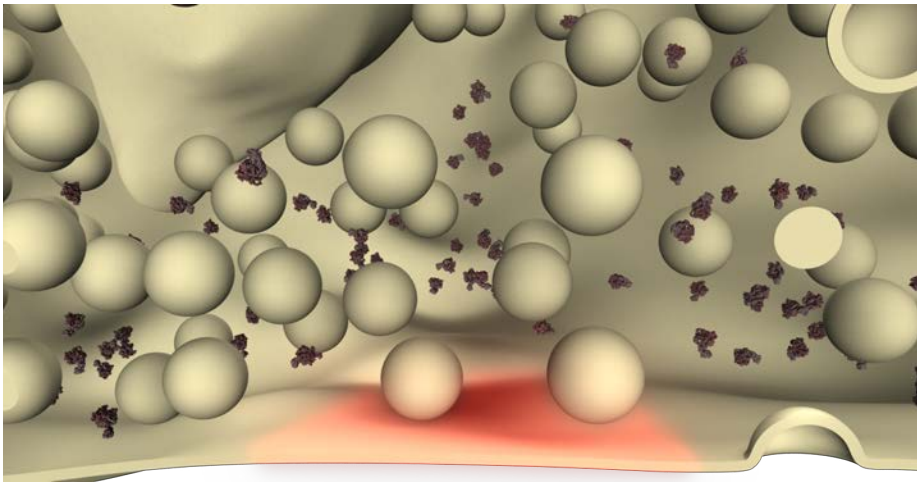
Haffner, C., et al. (2000). Curr Biol 10, 471-4.

Synaptojanin 1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.103	365.61 ± 40.31	2.43



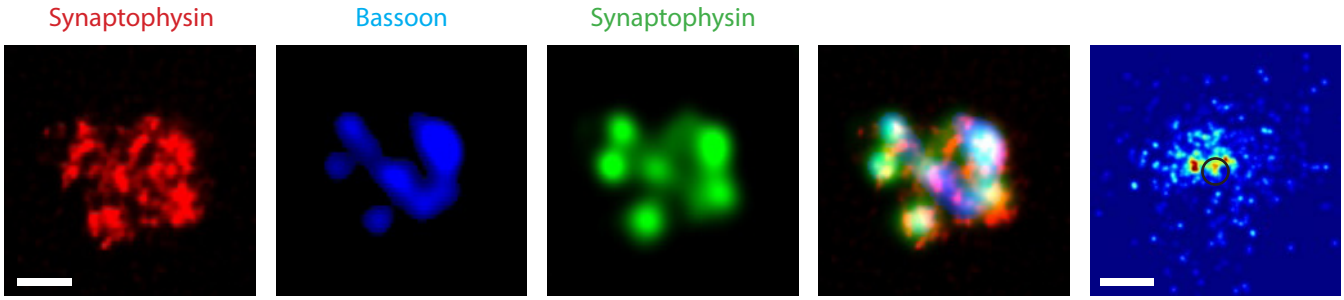




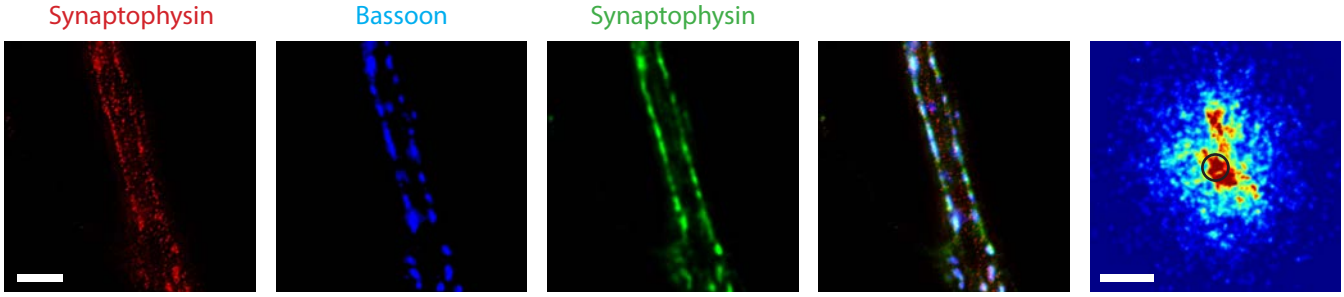
Synaptophysin

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Vesicular	0.530	9641.62 ± 747.41	64.38

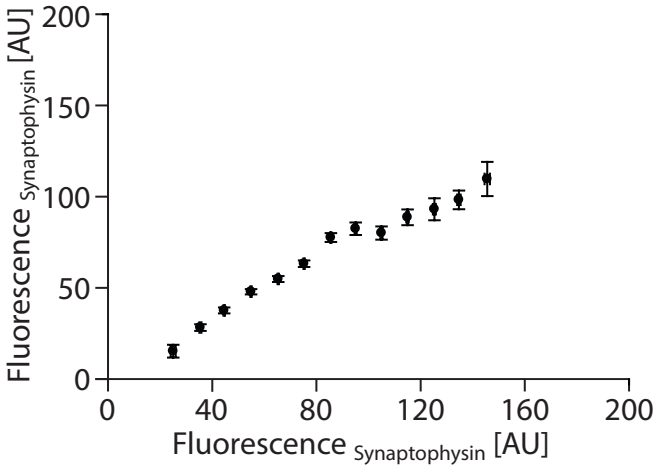
Synaptosomes (Cortex and Cerebellum, *Rattus norvegicus*)

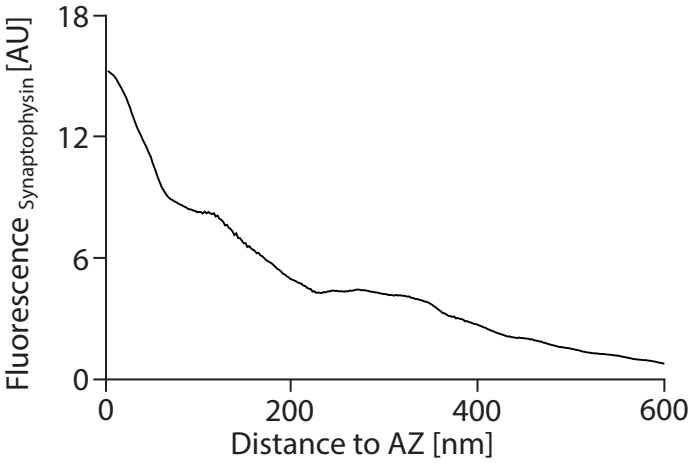


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Synaptophysin):

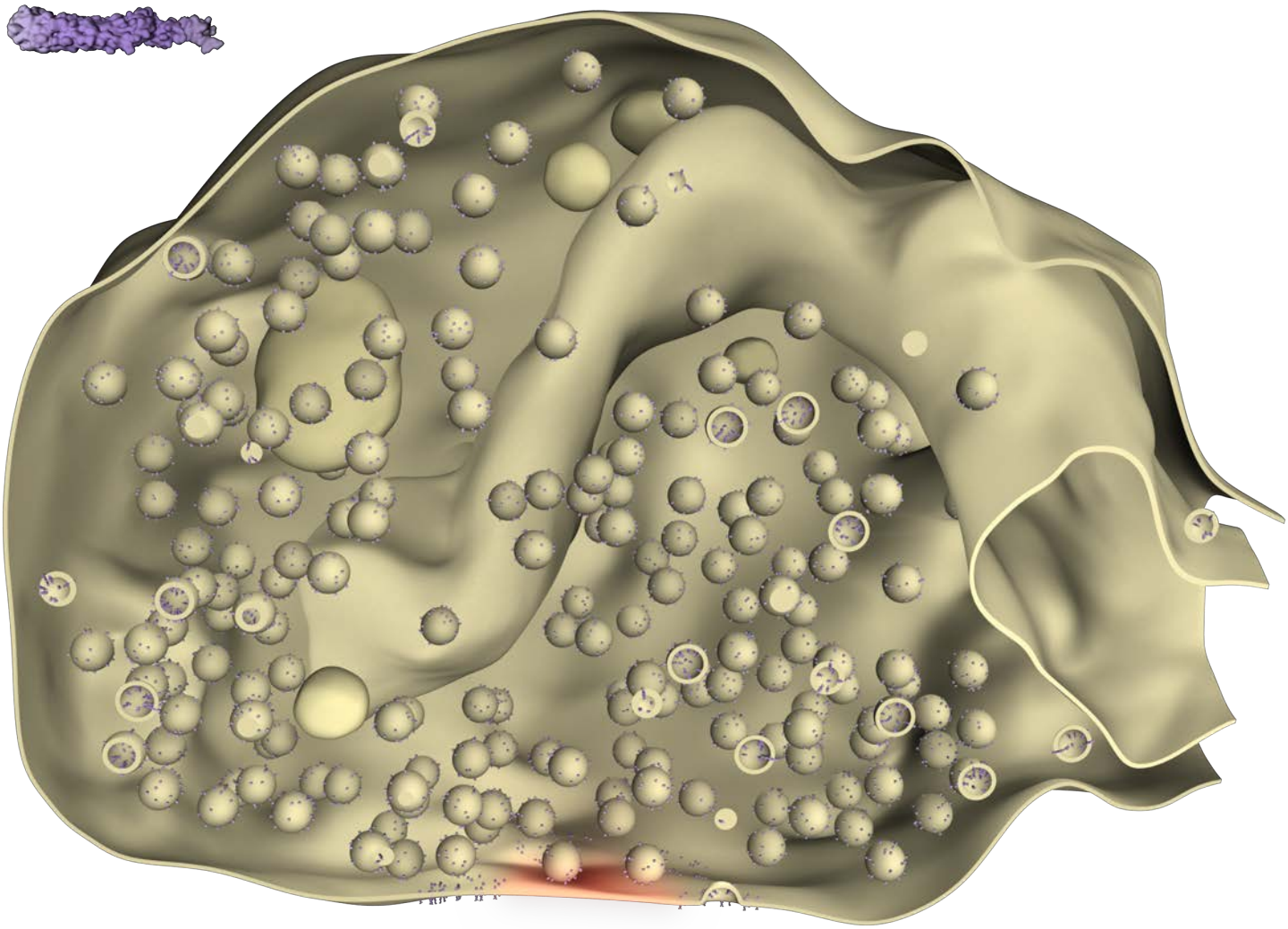
Immunoblots - Synaptic Systems (Göttingen, Germany), 101 011
Synaptosome stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany)
HC stainings - Synaptic Systems (Göttingen, Germany), 101 011
NMJ stainings - Synaptic Systems (Göttingen, Germany), 101 011
Slice/Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 101 004

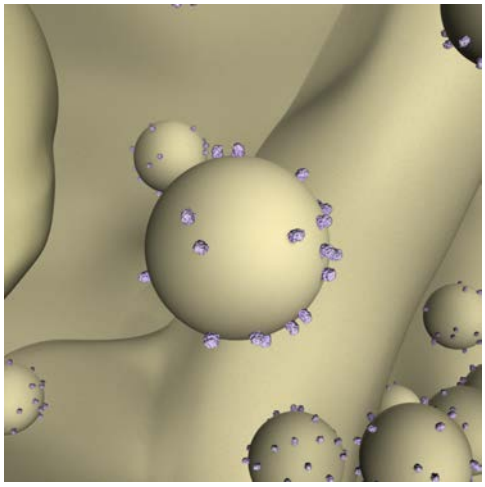
References:

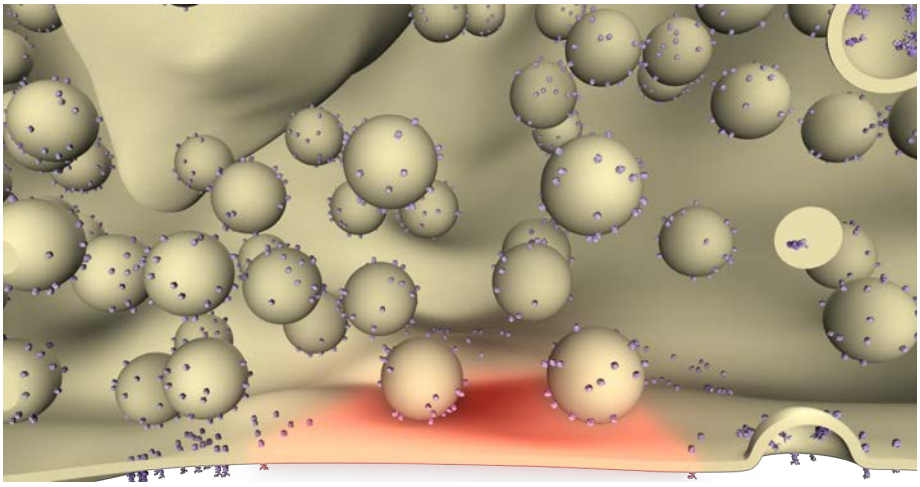
PDB-Identifier (structural information): not available; assembled from individual domains.
Jahn, R., et al. (1985). Proc Natl Acad Sci U S A 82, 4137-41.
Reisinger, C., et al. (2004). J Neurochem 90, 1-8.
Takamori, S., et al. (2006). Cell 127, 831-846.

Synaptophysin

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Vesicular	0.530	9641.62 ± 747.41	64.38





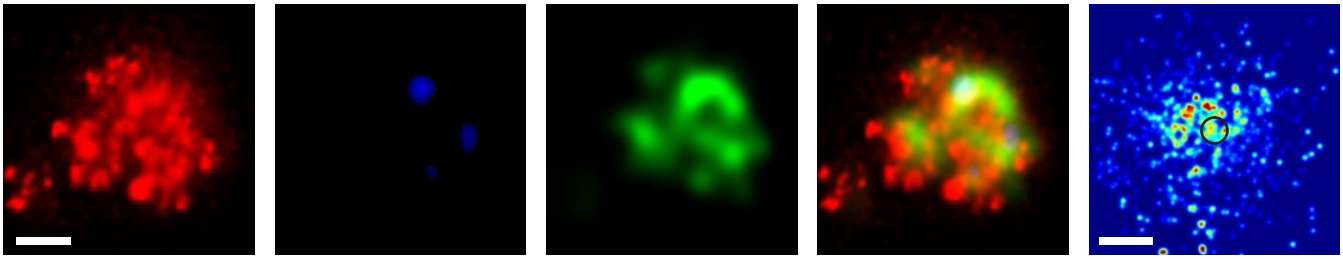


Synaptotagmin 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium sensor	0.808	10332.00 ±1079.20	68.99

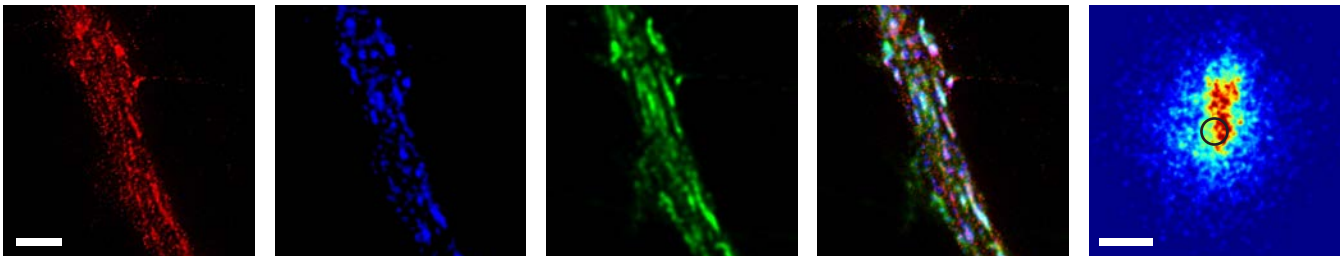
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

Synaptotagmin 1 Bassoon Synaptophysin



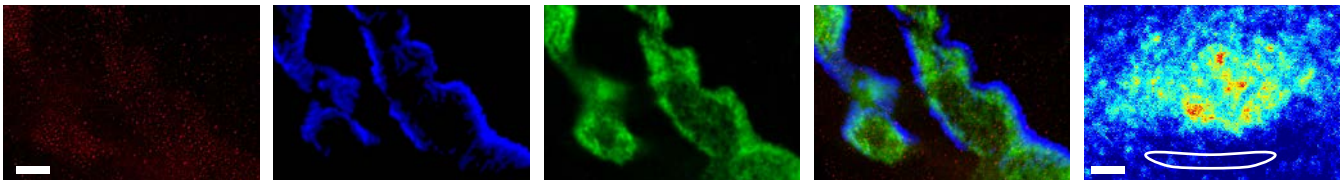
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

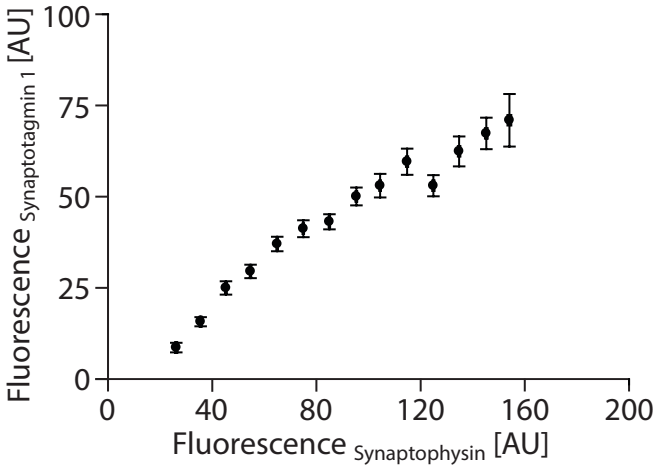
Synaptotagmin 1 Bassoon Synaptophysin

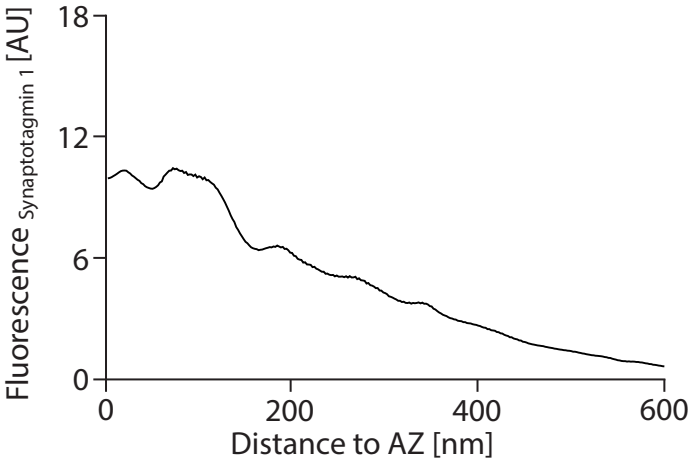


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

Synaptotagmin 1 Bungarotoxin Synaptophysin







Antibodies used (for Synaptotagmin 1):

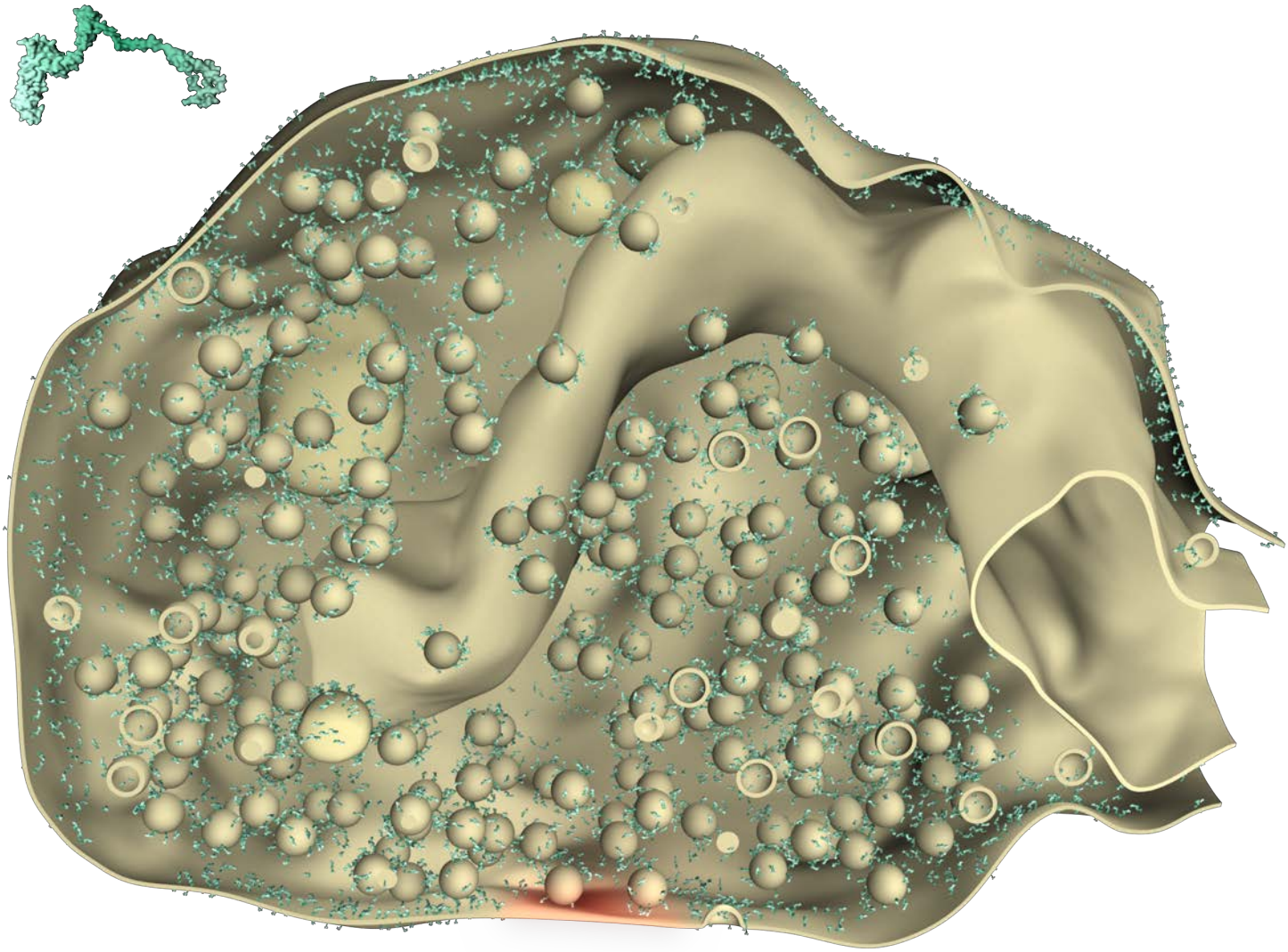
Immunoblots - Synaptic Systems (Göttingen, Germany), 105 011
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 105 102
HC stainings - Synaptic Systems (Göttingen, Germany), 105 311AT1
NMJ stainings - Synaptic Systems (Göttingen, Germany), 105 102

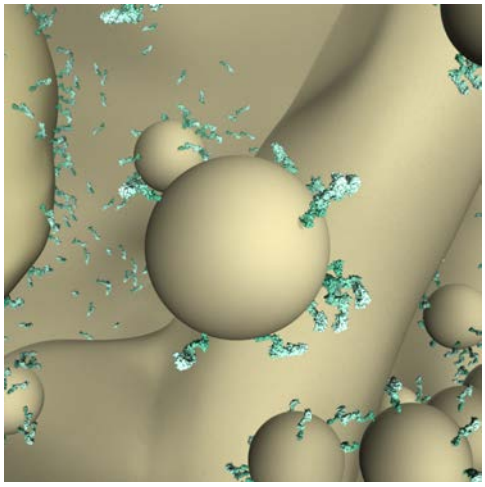
References:

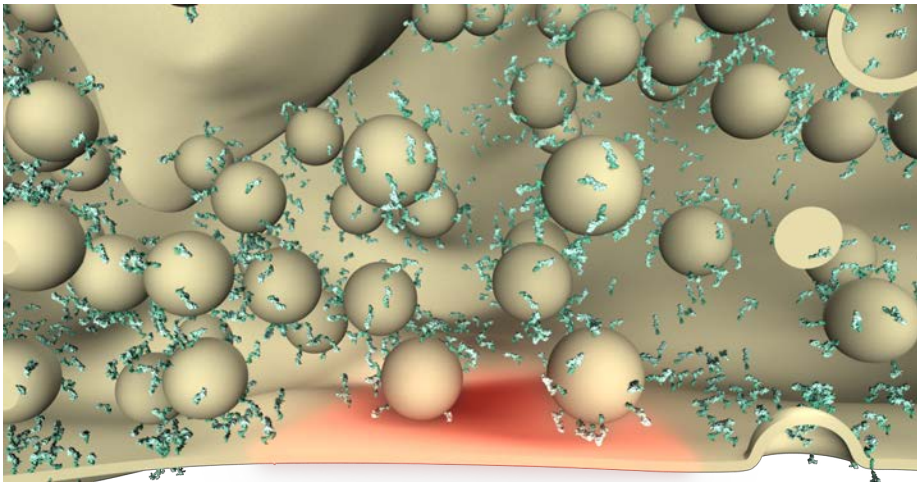
PDB-Identifier (structural information): 2hn8.
Opazo, F., et al. (2010). Traffic 11, 800-12.
Takamori, S., et al. (2006). Cell 127, 831-46.

Synaptotagmin 1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium sensor	0.808	10332.00 ±1079.20	68.99





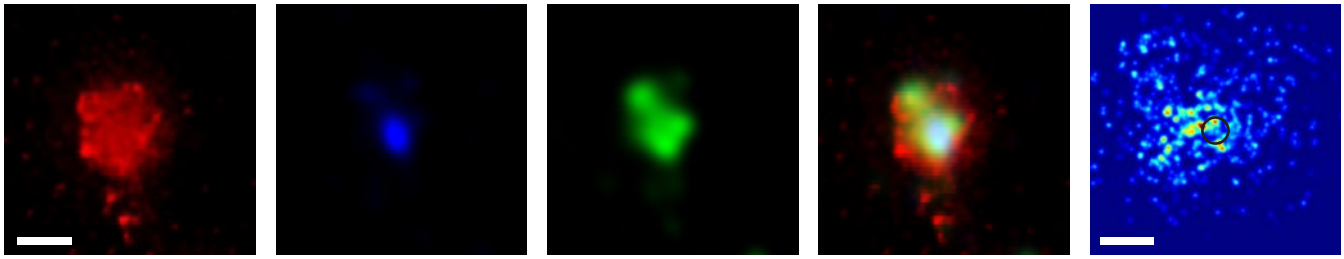


Synaptotagmin 2

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium sensor	0.023	297.28 ±11.37	1.98

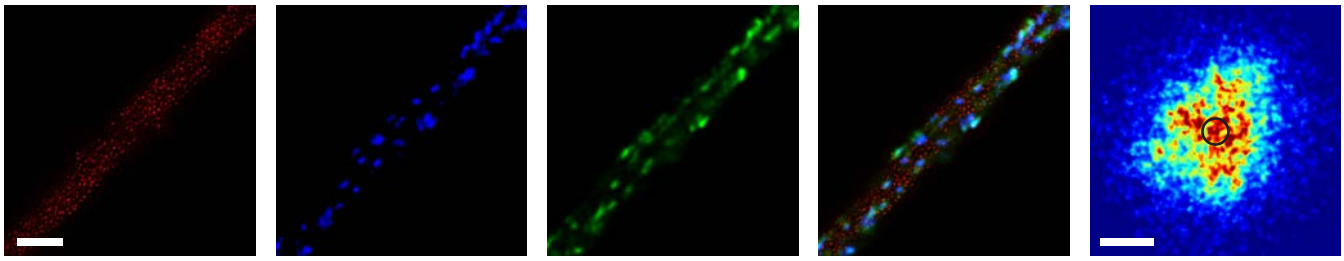
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

Synaptotagmin 2 | Bassoon | Synaptophysin



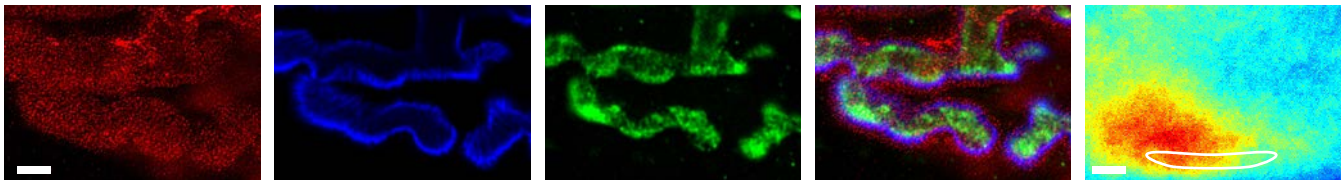
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

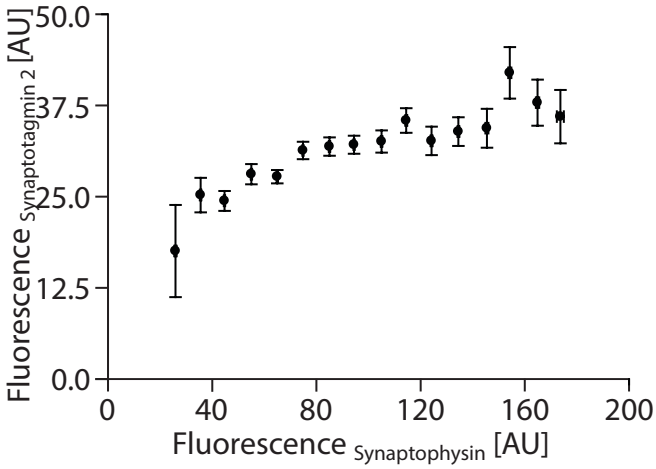
Synaptotagmin 2 | Bassoon | Synaptophysin

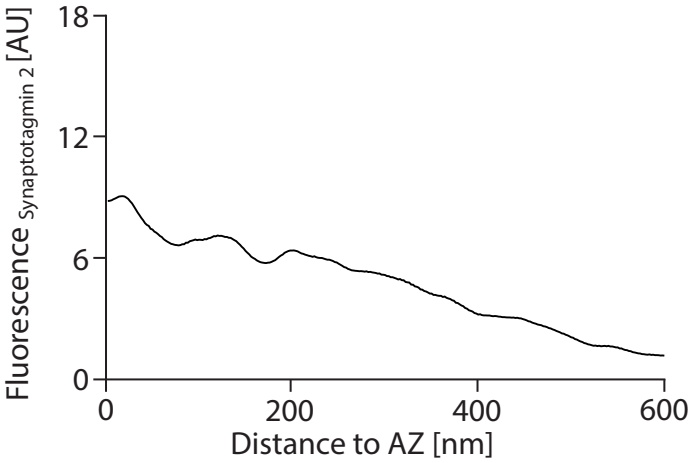


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

Synaptotagmin 2 | Bungarotoxin | Synaptophysin







Antibodies used (for Synaptotagmin 2):

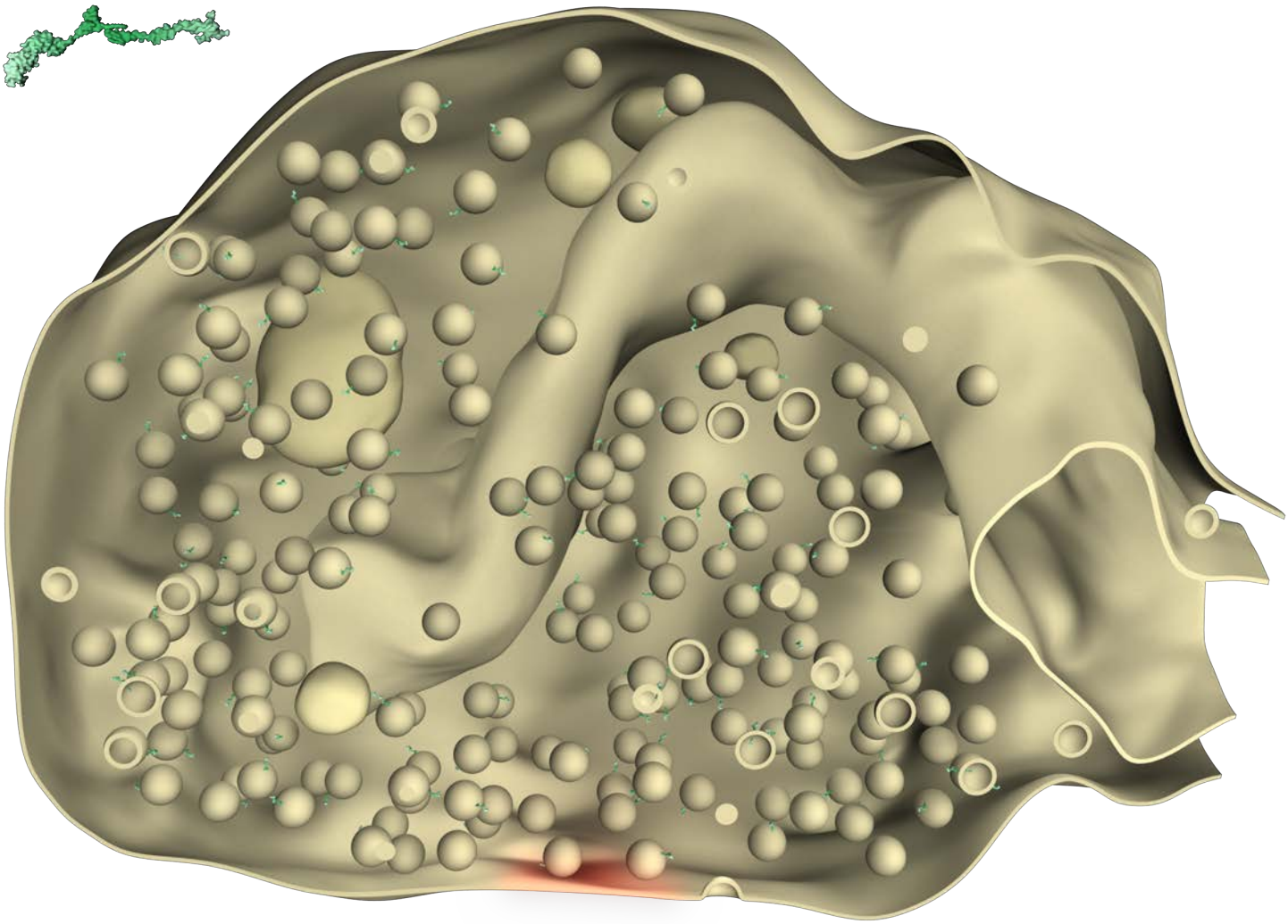
Immunoblots - Abcam (Cambridge, England), ab60716
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 105 123
HC stainings - Synaptic Systems (Göttingen, Germany), 105 123
NMJ stainings - Abcam (Cambridge, England), ab60716

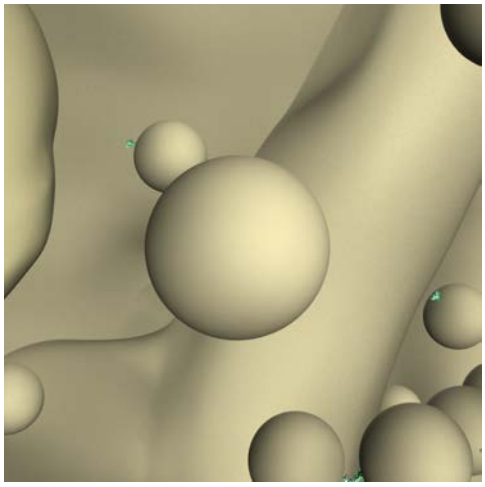
References:

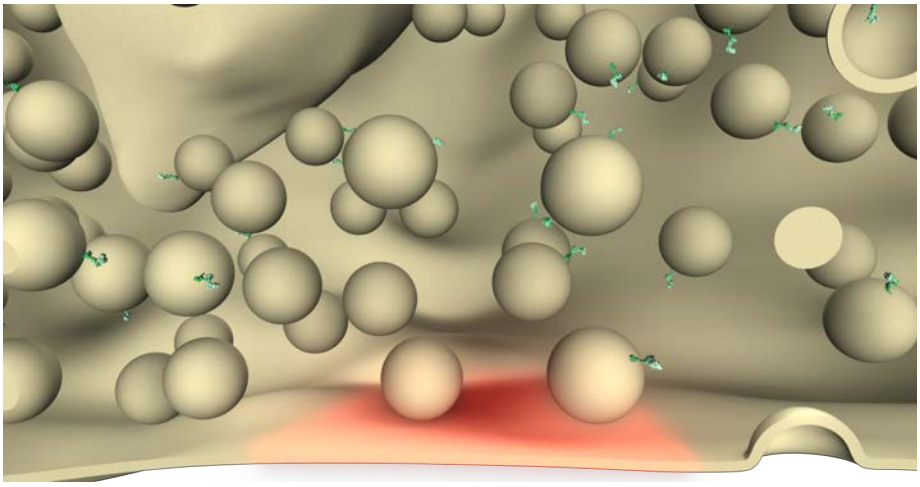
PDB-Identifier (structural information): not available; modeled similarly to synaptotagmin 1
Pang, Z.P., et al. (2006a). J Neurosci 26, 13493-504.
Pang, Z.P., et al. (2006b). EMBO J 25, 1039-50.
Takamori, S., et al. (2006). Cell 127, 831-46.

Synaptotagmin 2

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium sensor	0.023	297.28 ±11.37	1.98





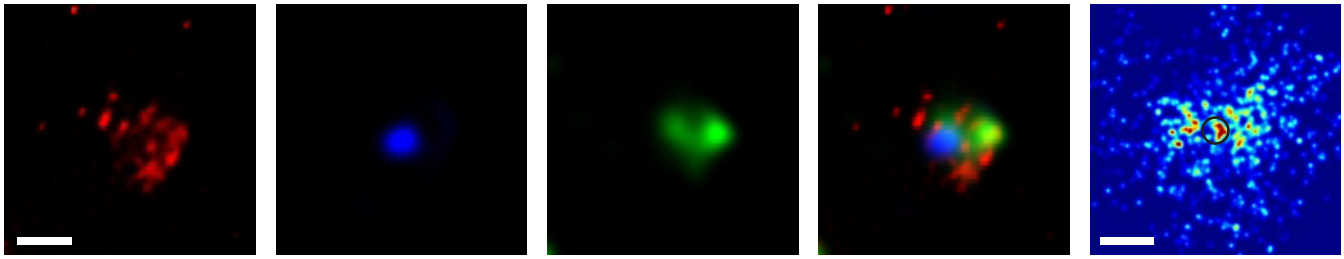


Synaptotagmin 7

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Calcium sensor	0.014	182.64 ±3.54	1.22

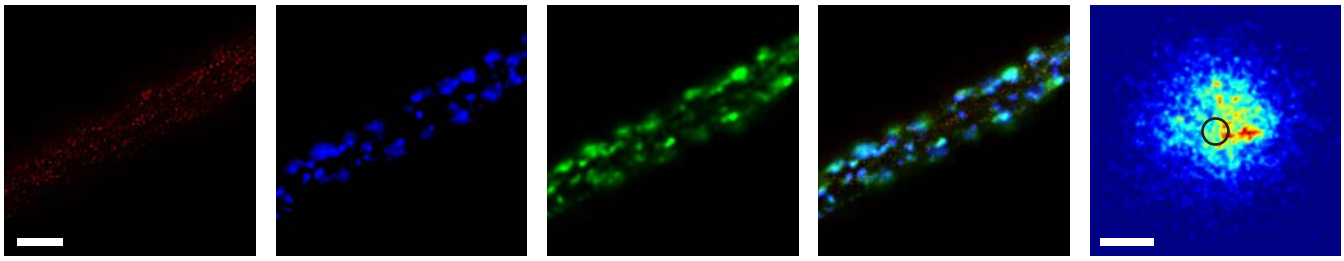
Synaptosomes (Cortex and Cerebellum, *Rattus norvegicus*)

Synaptotagmin 7 Bassoon Synaptophysin



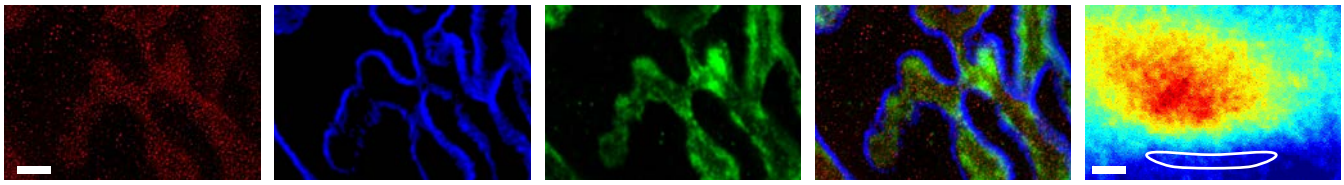
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

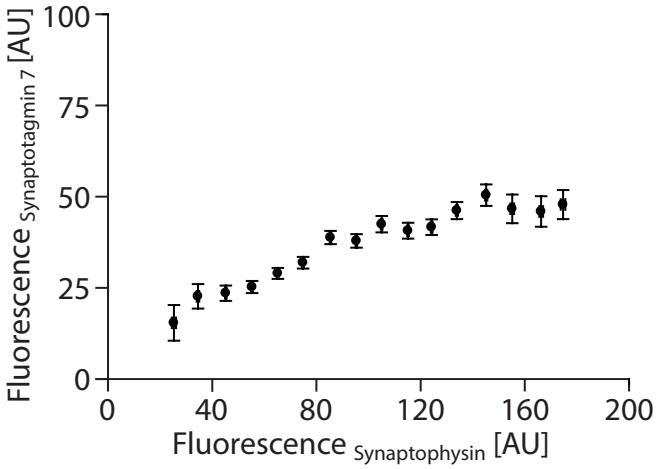
Synaptotagmin 7 Bassoon Synaptophysin

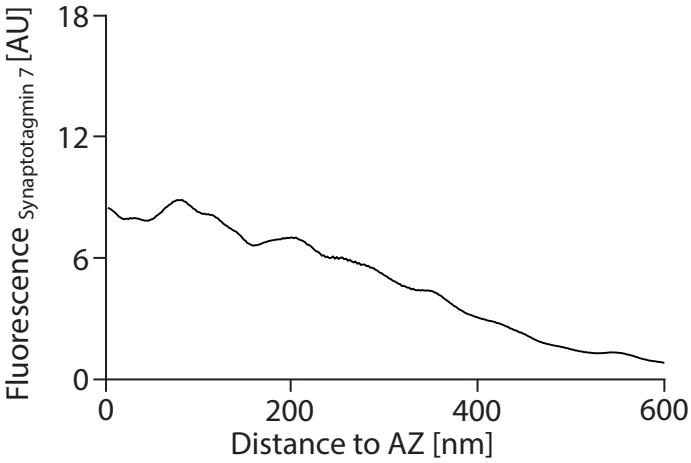


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

Synaptotagmin 7 Bungarotoxin Synaptophysin







Antibodies used (for Synaptotagmin 7):

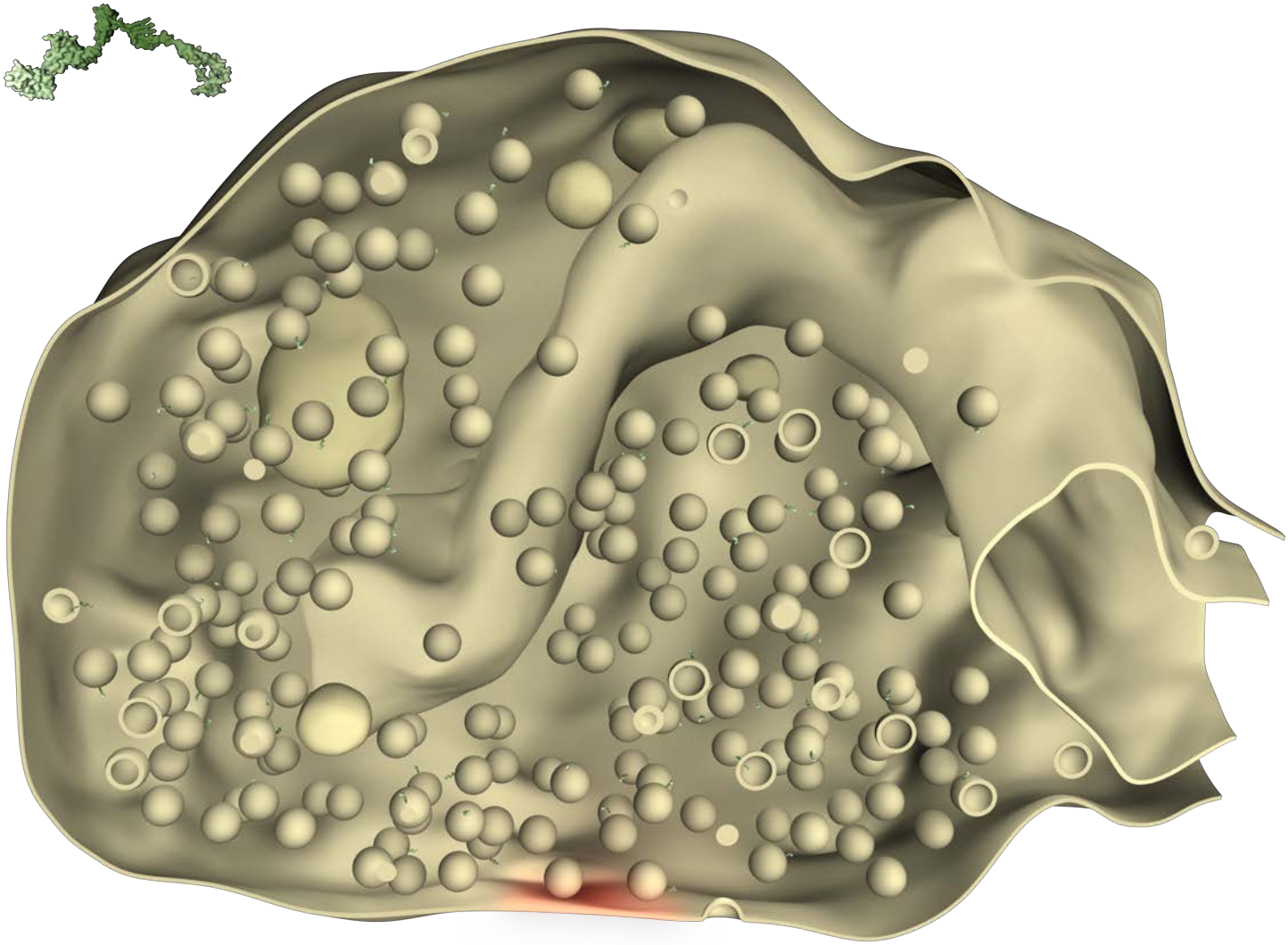
Immunoblots - Synaptic Systems (Göttingen, Germany), 105 173
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 105 173
HC stainings - Synaptic Systems (Göttingen, Germany), 105 173
NMJ stainings - Synaptic Systems (Göttingen, Germany), 105 173

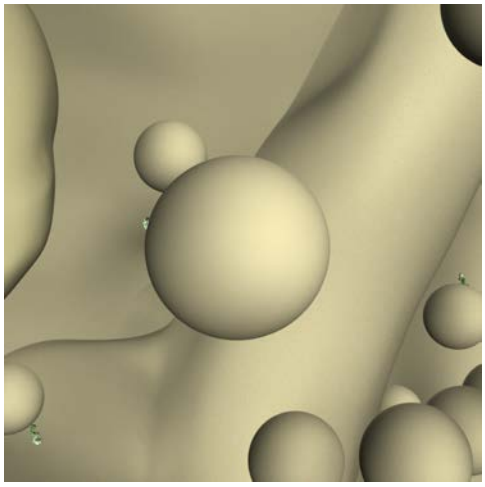
References:

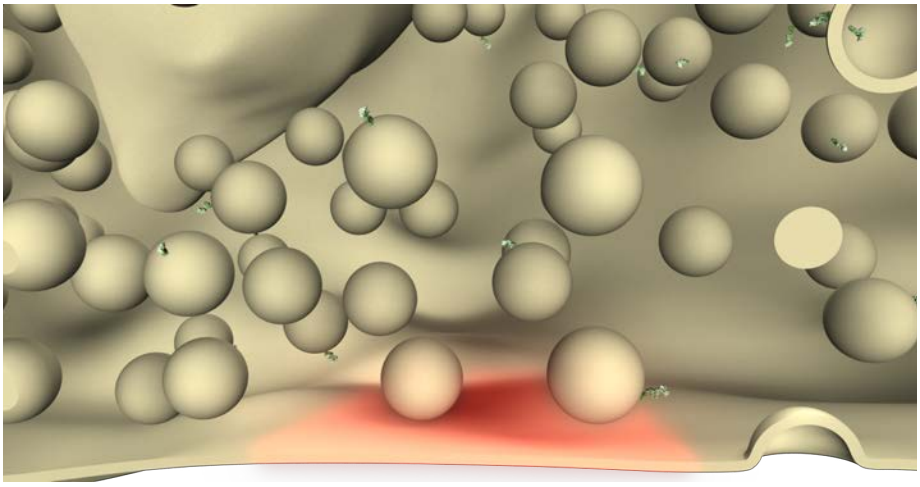
PDB-Identifier (structural information): not available; modeled similarly to synaptotagmin 1
Fernandez, I., et al. (2001). Neuron 32, 1057-69.
Takamori, S., et al. (2006). Cell 127, 831-46.

Synaptotagmin 7

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Calcium sensor	0.014	182.64 ±3.54	1.22



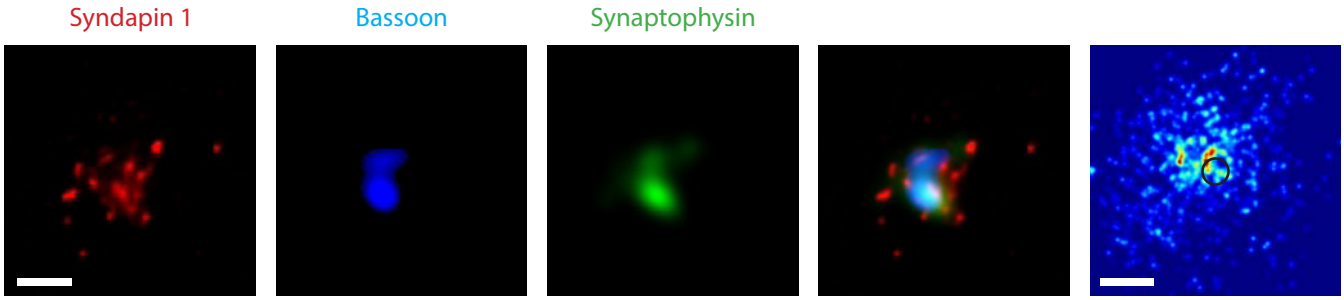




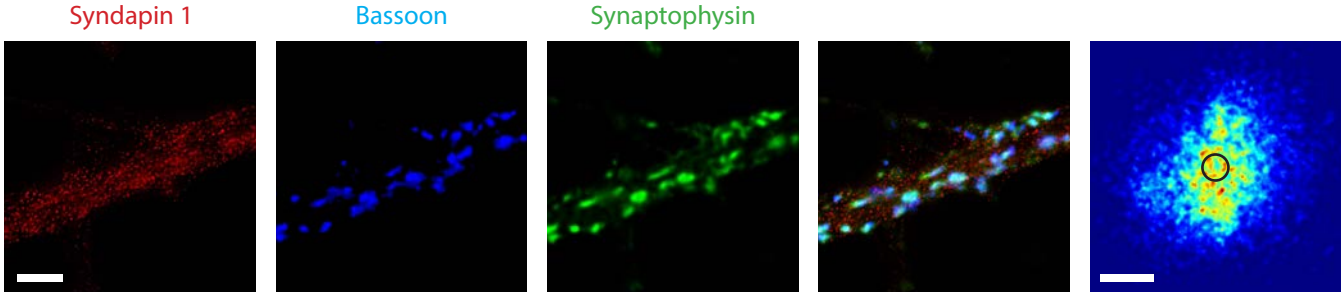
Syndapin 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Endocytosis	0.266	3201.00 ±131.28	21.37

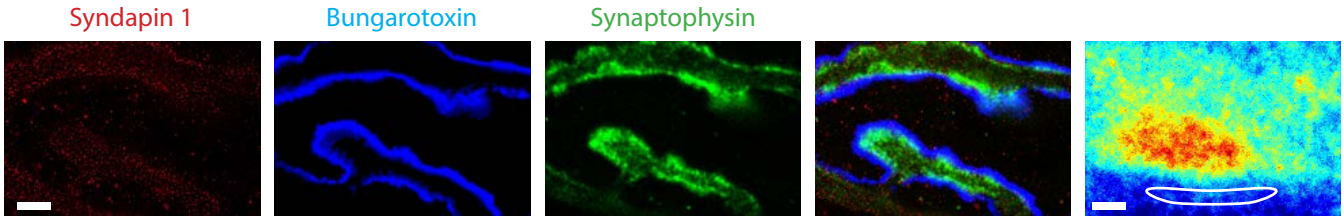
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

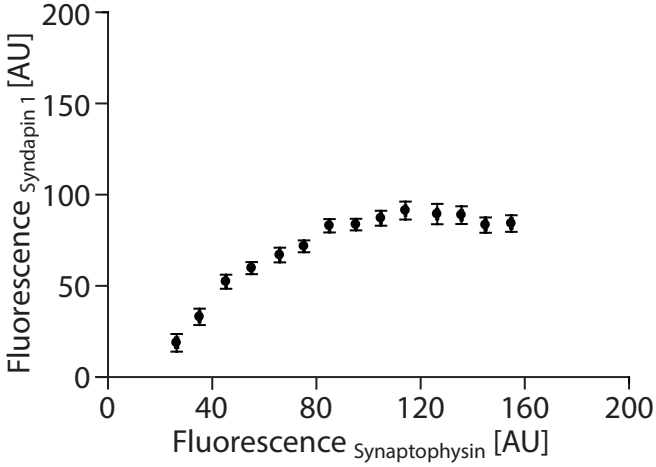


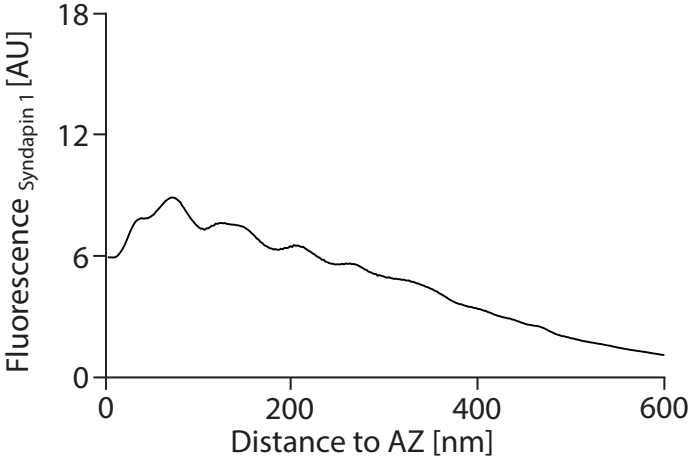
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Syndapin 1):

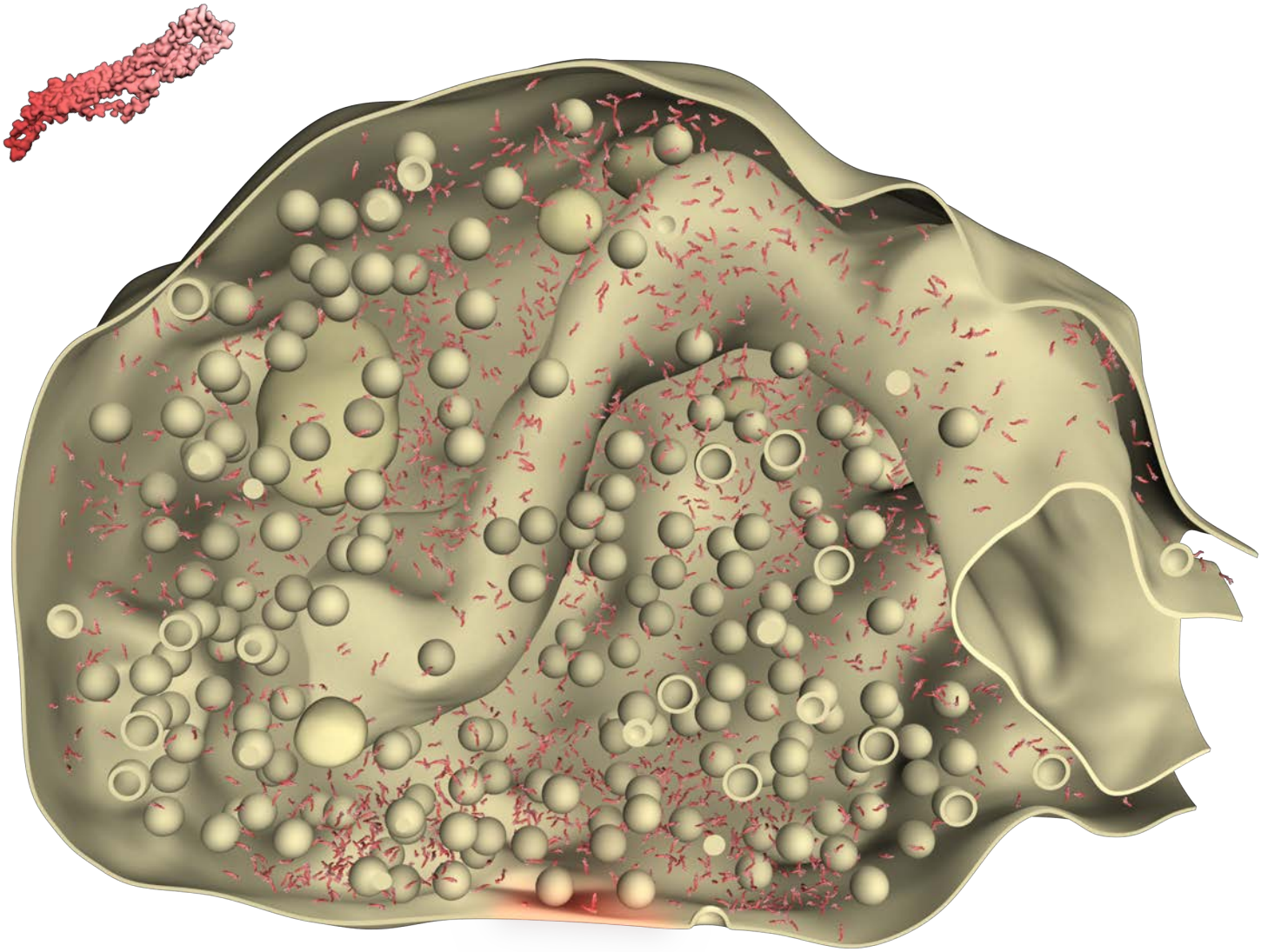
Immunoblots - Novus Biologicals (Littleton, Colorado, USA), H00029993-B01
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 196 002
HC stainings - Novus Biologicals (Littleton, Colorado, USA), H00029993-B01
NMJ stainings - Synaptic Systems (Göttingen, Germany), 196 002

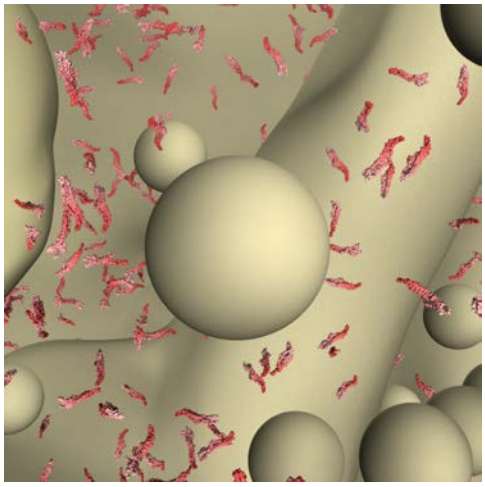
References:

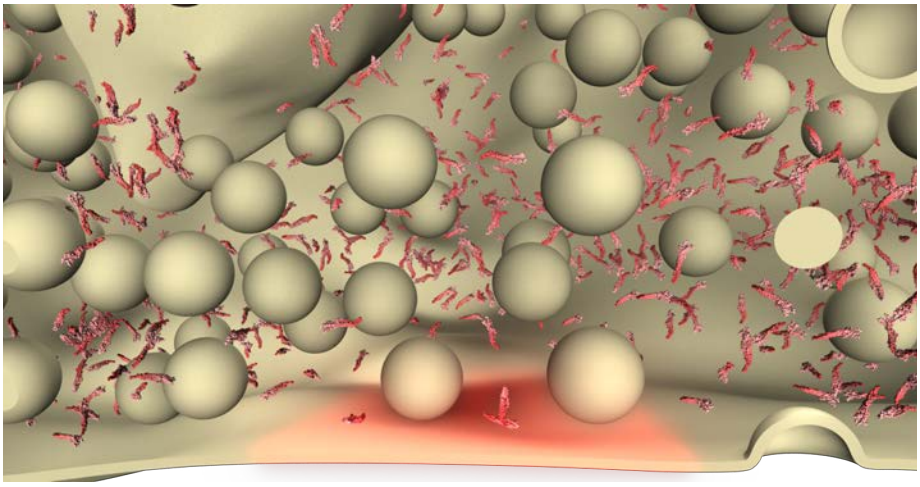
PDB-Identifier (structural information): 2x3x.
Kessels, M.M., and Qualmann, B. (2004). J Cell Sci 117, 3077-86.
Anggono, V., et al. (2006). Nat Neurosci 9, 752-60.
Kessels, M.M., and Qualmann, B. (2006). J Biol Chem 281. 13285-99.

Syndapin 1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Endocytosis	0.266	3201.00 ±131.28	21.37



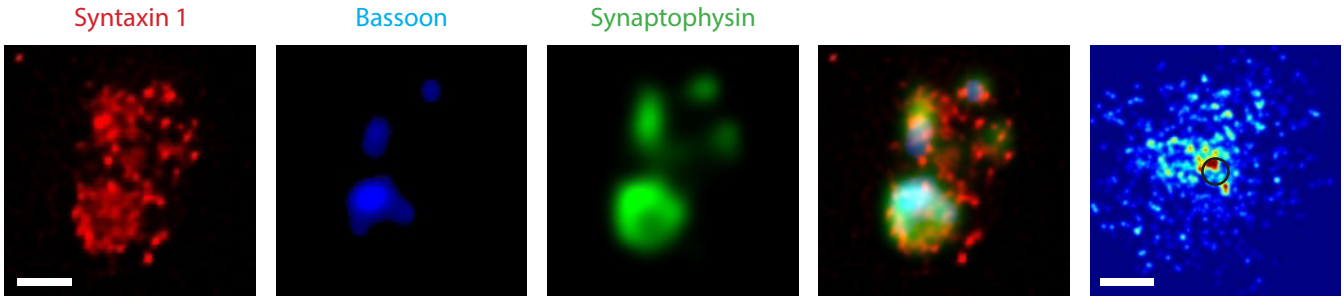




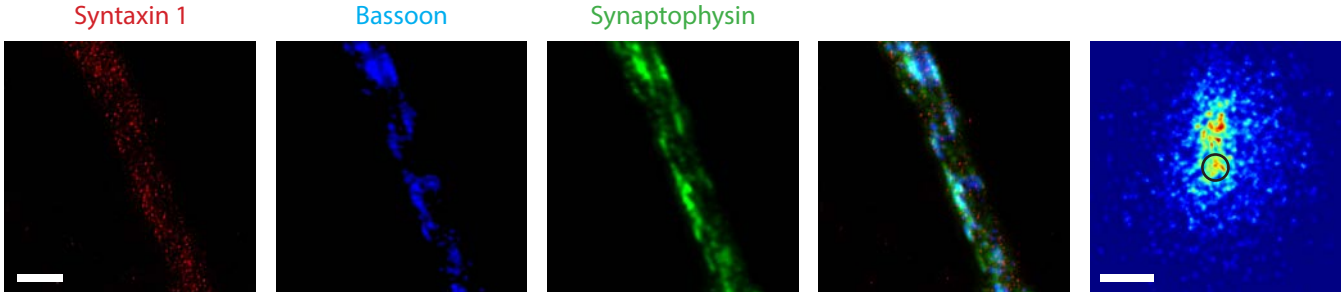
Syntaxin 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	1.099	20096.00 ± 999.43	134.18

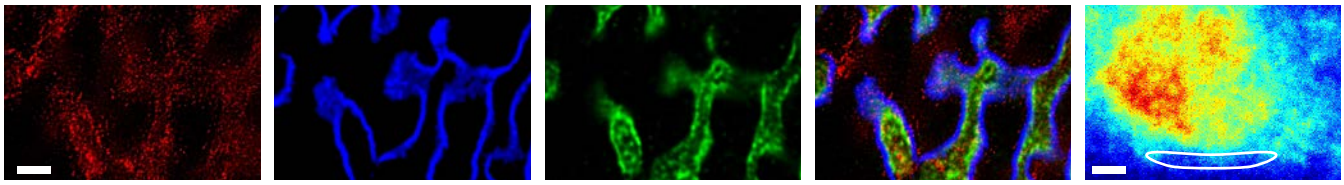
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

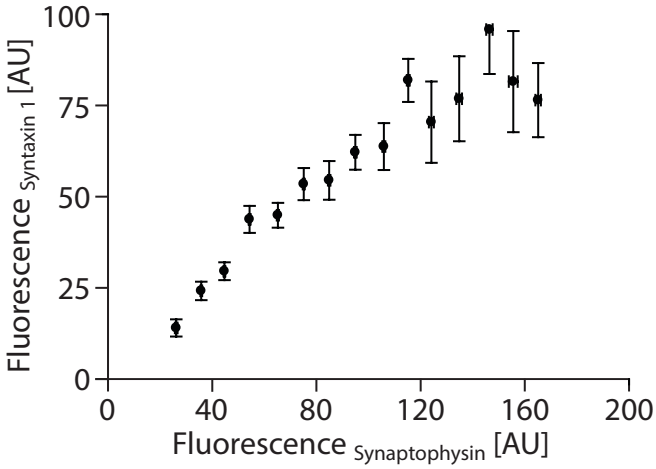


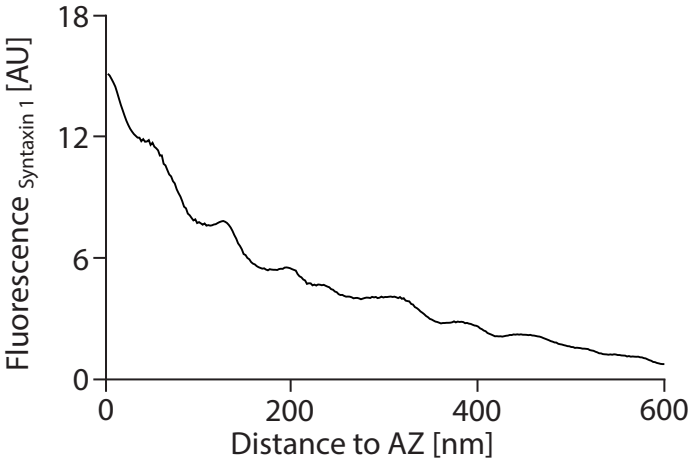
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Syntaxin 1):

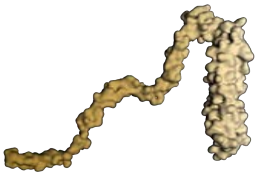
Immunoblots - Reinhard Jahn (MPI-bpc, Göttingen, Germany)
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 110 011
HC stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany)
NMJ stainings - Synaptic Systems (Göttingen, Germany), 110 011
Slice/synaptosome stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany)

References:

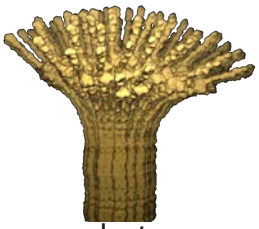
PDB-Identifier (structural information): 1hvv.
Bennett, M.K., et al. (2004). Neuron 41, 495-511.
Sieber, J.J., et al. (2007). Science 317, 1072-6.
Takamori, S., et al. (2006). Cell 127, 831-46.

Syntaxin 1

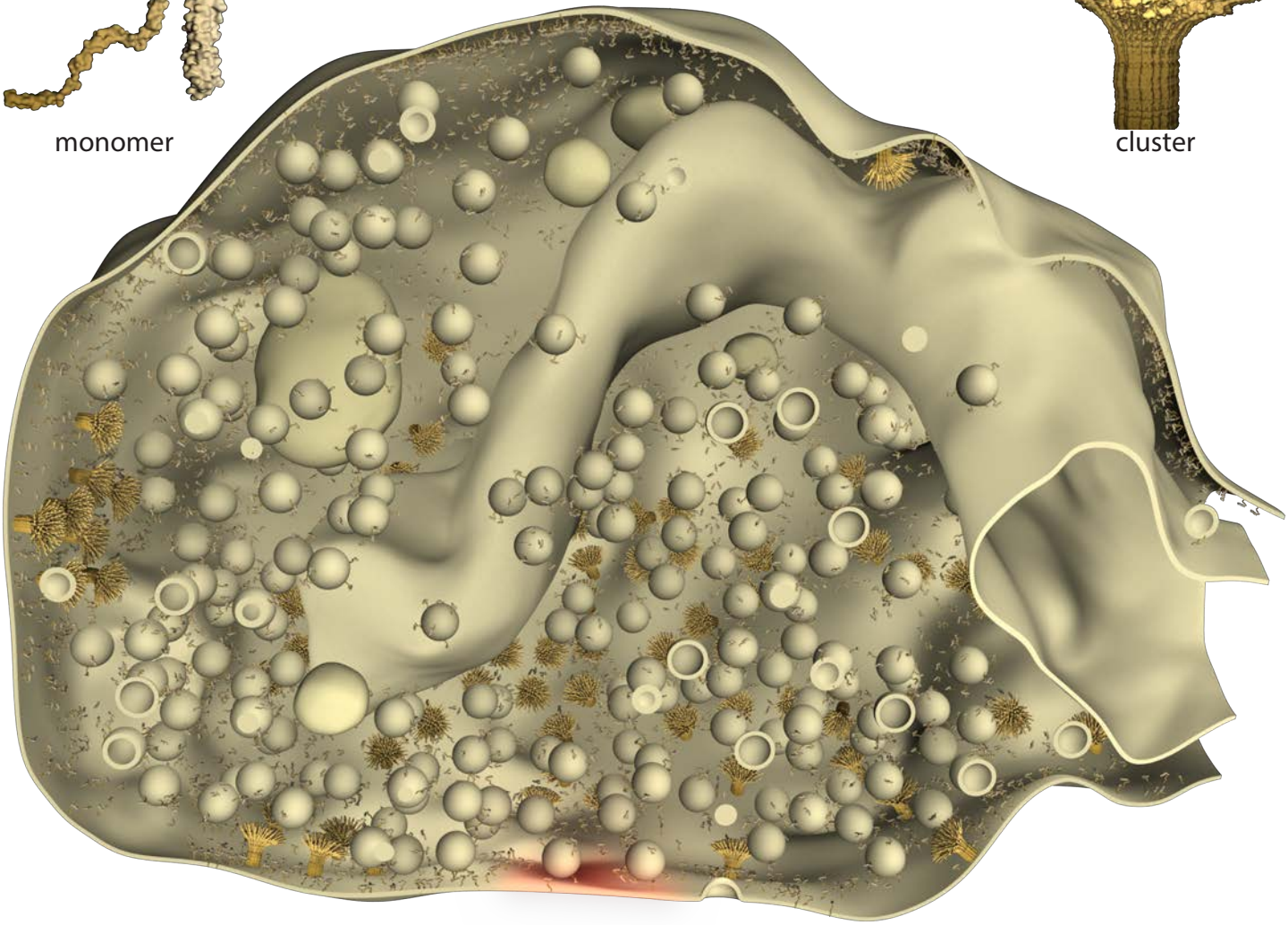
Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	1.099	20096.00 ± 999.43	134.18

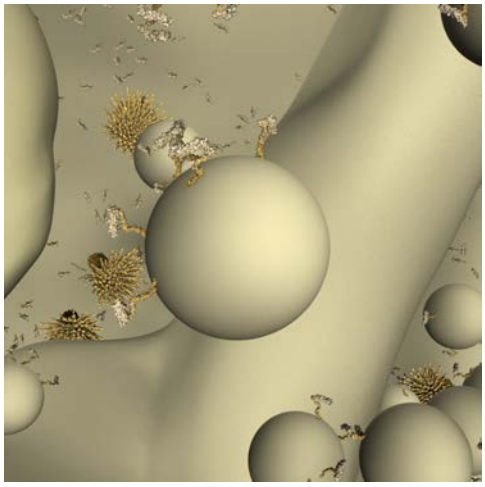


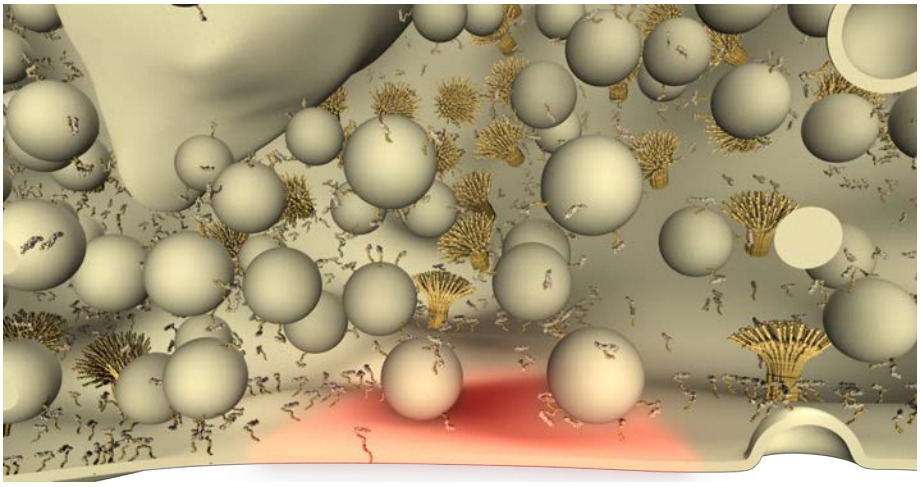
monomer



cluster



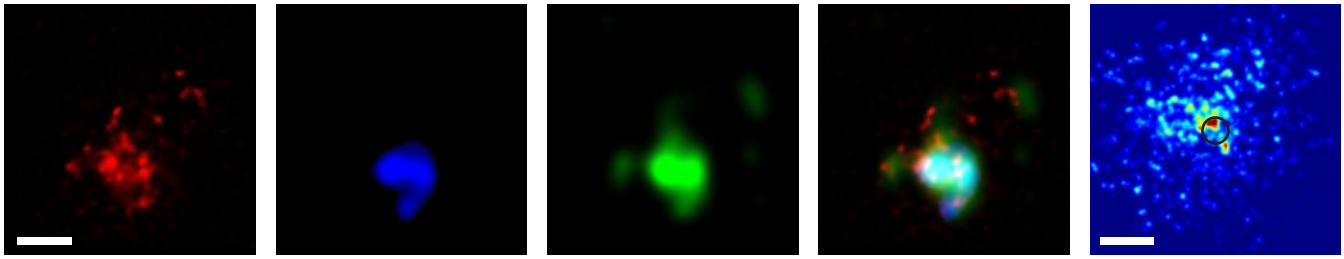




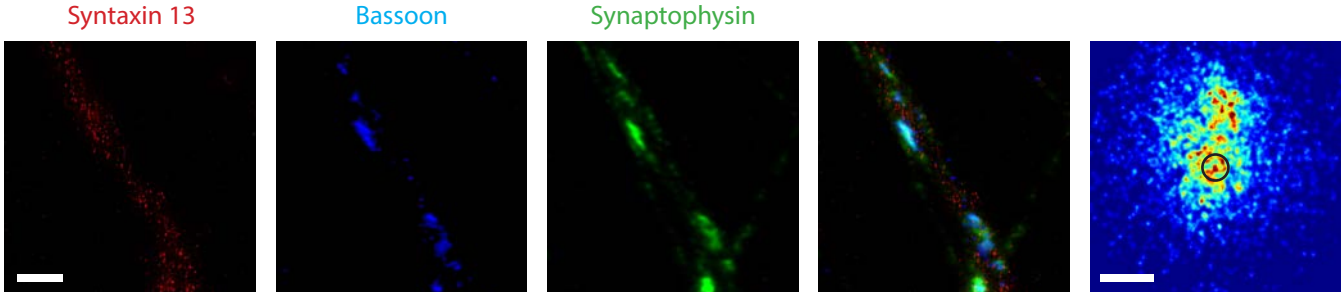
Syntaxin 13

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.0082	157.83 ± 3.49	1.05

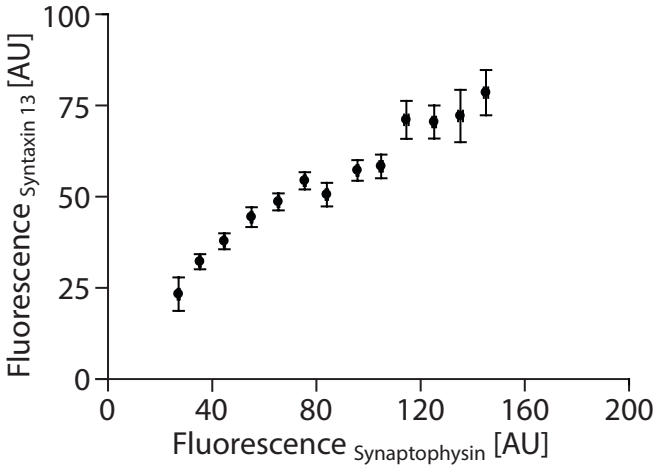
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

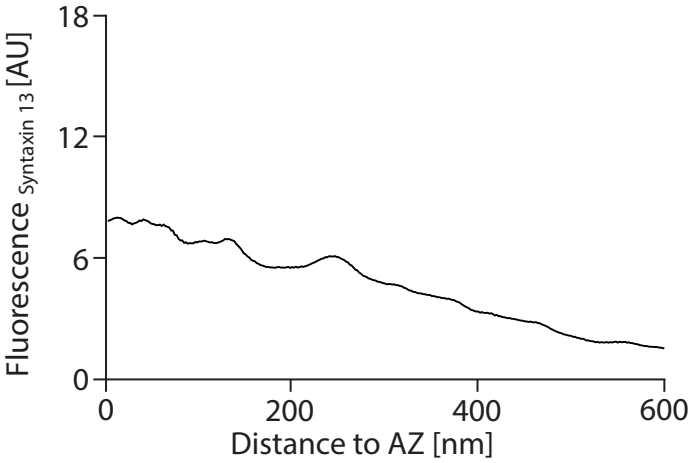


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Syntaxin 13):

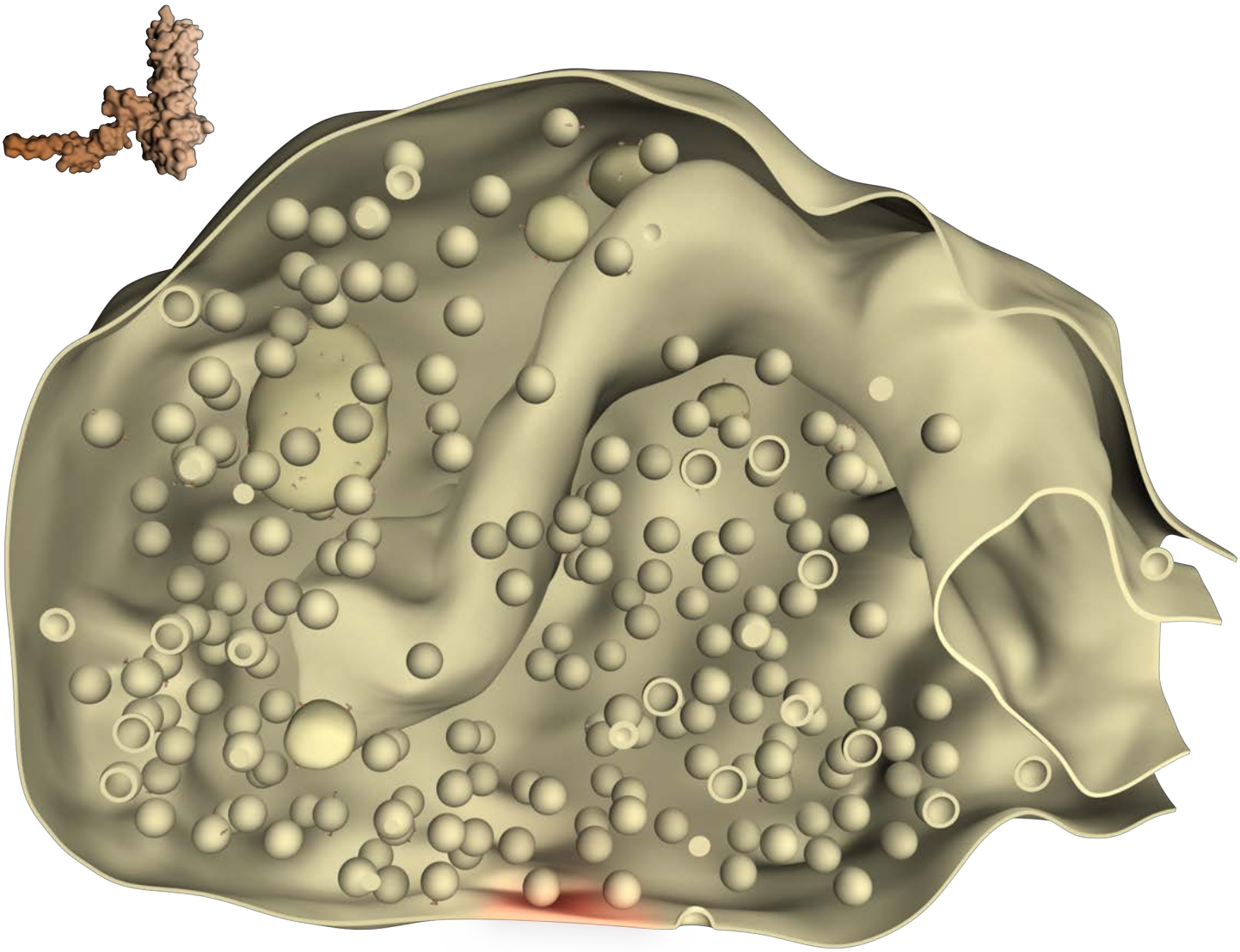
Immunoblots - Synaptic Systems (Göttingen, Germany), 110 132
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 110 131
HC stainings - Synaptic Systems (Göttingen, Germany), 110 131
NMJ stainings - Synaptic Systems (Göttingen, Germany), 110 132

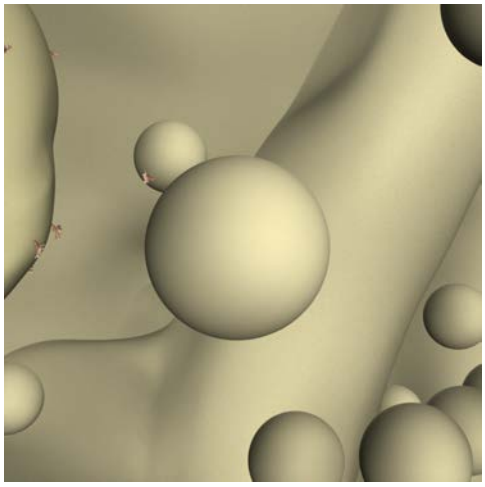
References:

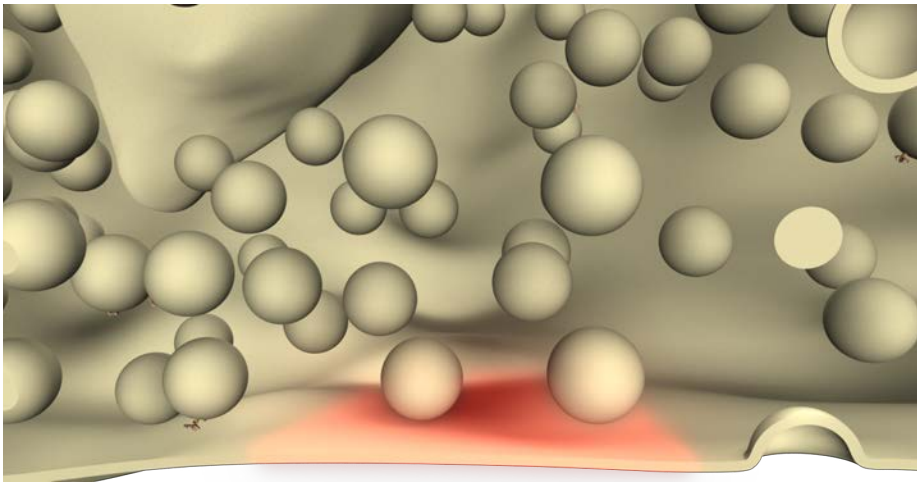
PDB-Identifier (structural information): not available; modeled similarly to syntaxin 1.
Prekeris, R., et al. (1998). J Cell Biol 143, 957-71.
Tang, B.L., et al. (1998). J Biol Chem 273, 6944-50.
Takamori, S., et al. (2006). Cell 127, 831-46.

Syntaxin 13

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.0082	157.83 ± 3.49	1.05



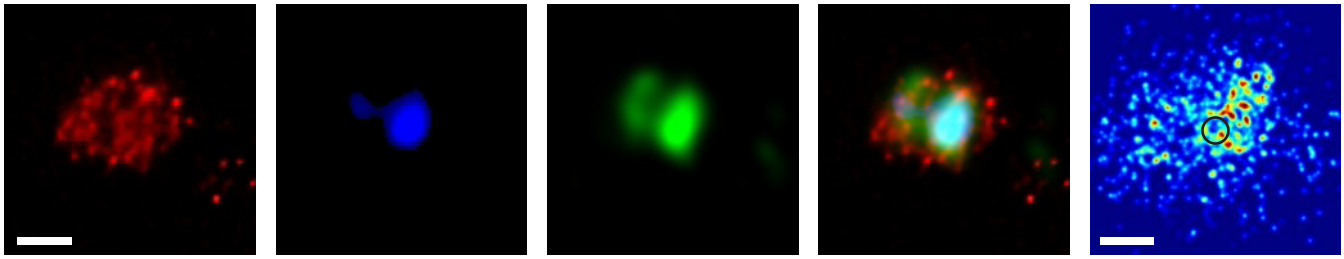




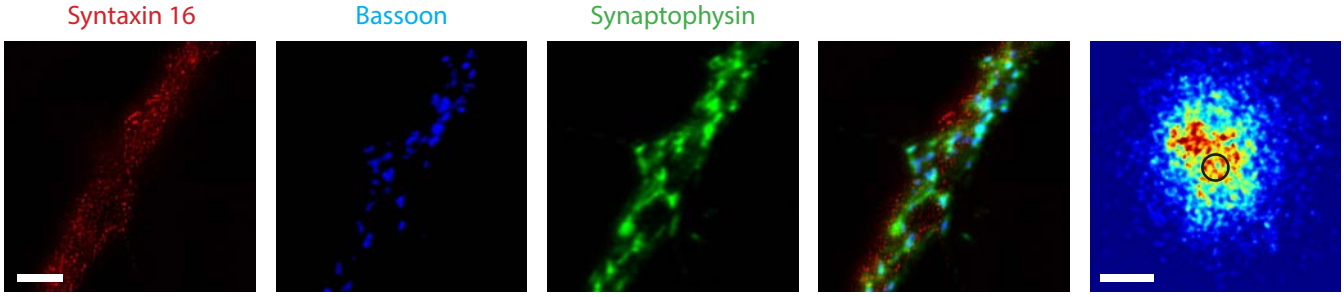
Syntaxin 16

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.0056	91.27 ± 5.68	0.61

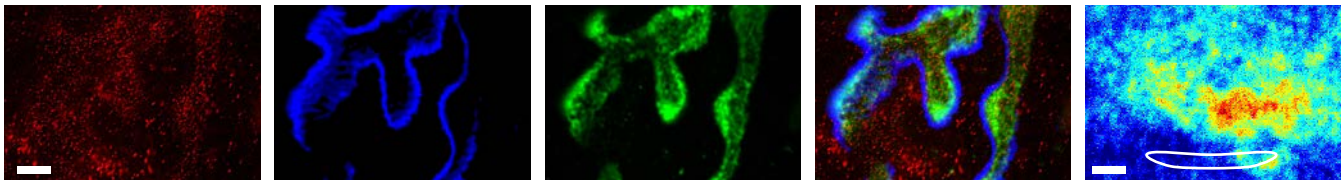
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

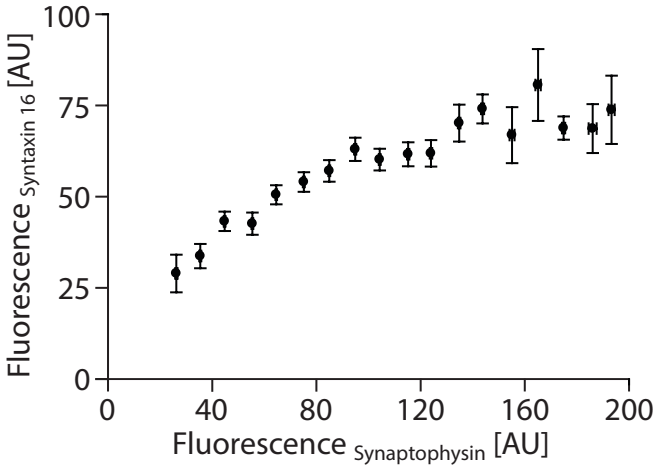


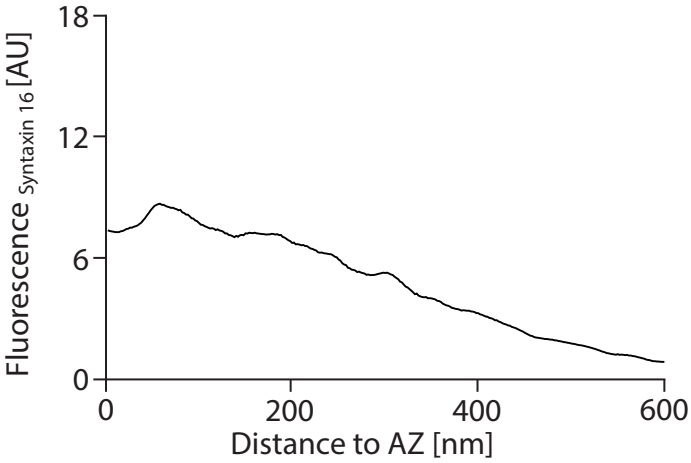
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Syntaxin 16):

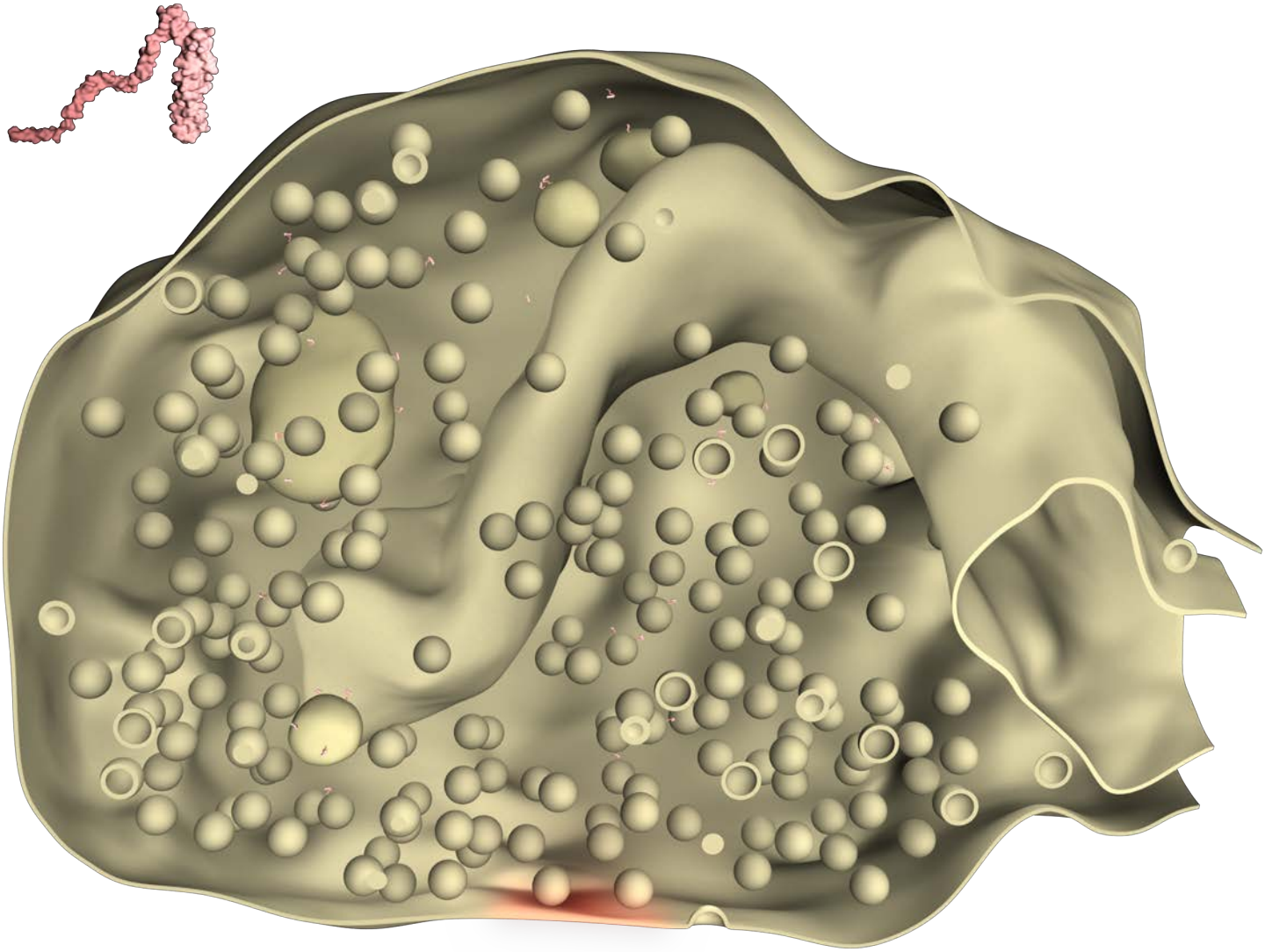
Immunoblots - Synaptic Systems (Göttingen, Germany), 110 162
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 110 162
HC stainings - Synaptic Systems (Göttingen, Germany), 110 162
NMJ stainings - Synaptic Systems (Göttingen, Germany), 110 162

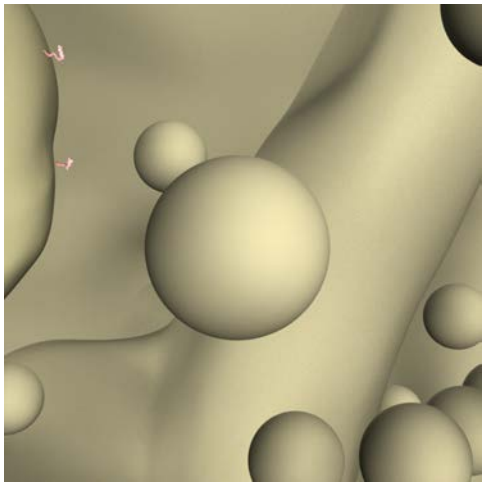
References:

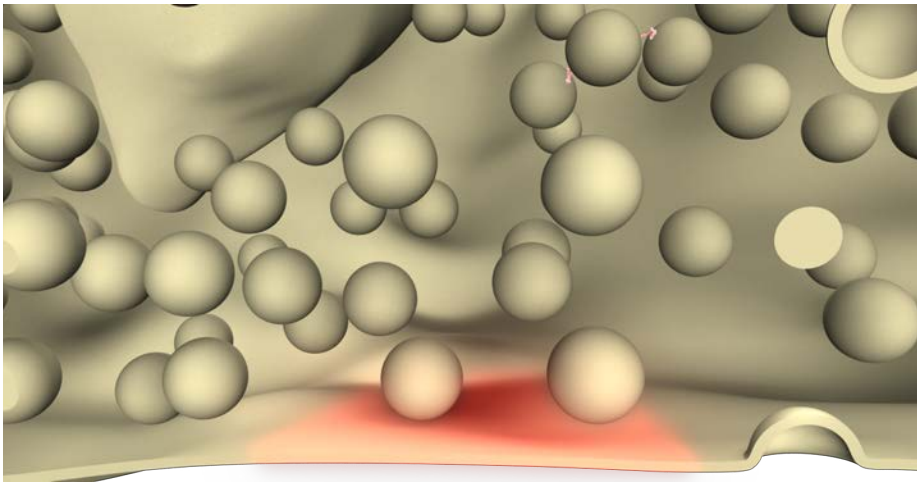
PDB-Identifier (structural information): not available; modeled similarly to syntaxin 1.
Simonsen, A., et al. (1998). Eur J Cell Biol 75, 223-31.
Chen, Y., et al. (2010). J Cell Physiol 225, 326-32.
Takamori, S., et al. (2006). Cell 127, 831-46.

Syntaxin 16

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.0056	91.27 ± 5.68	0.61



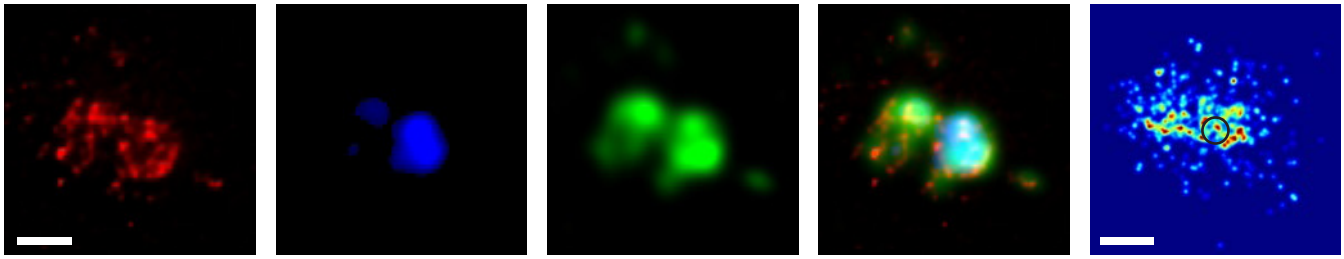




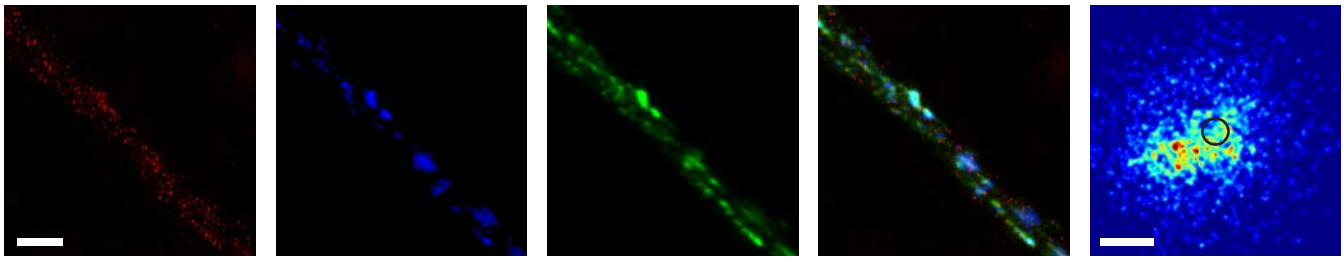
Syntaxin 6

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.0058	121.67 ± 8.96	0.81

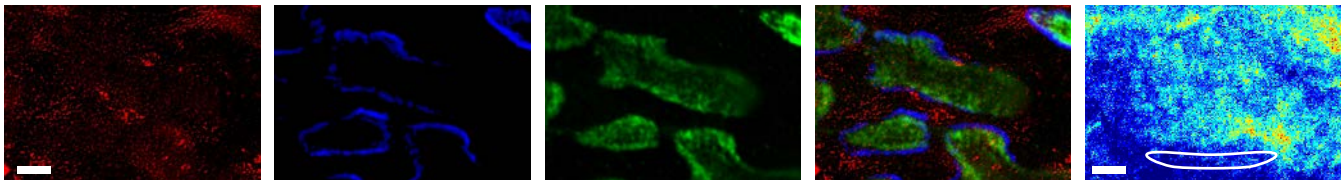
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

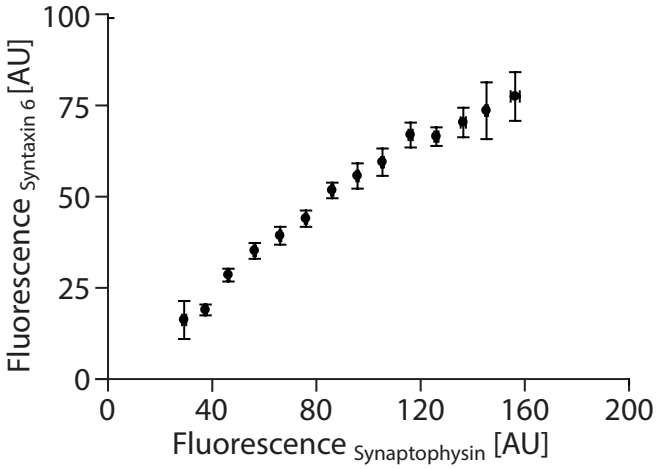


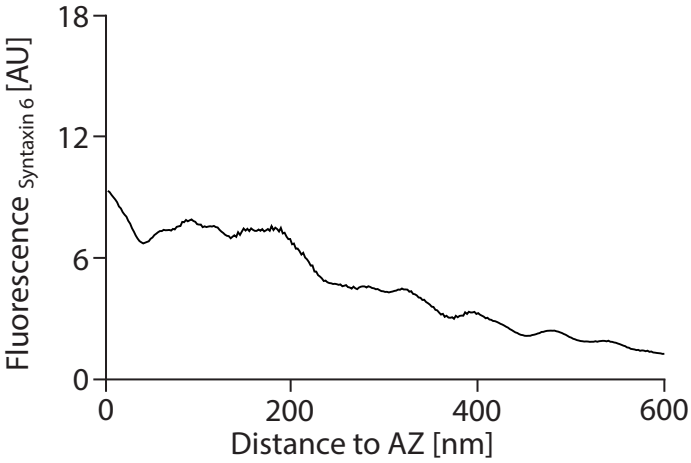
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Syntaxin 6):

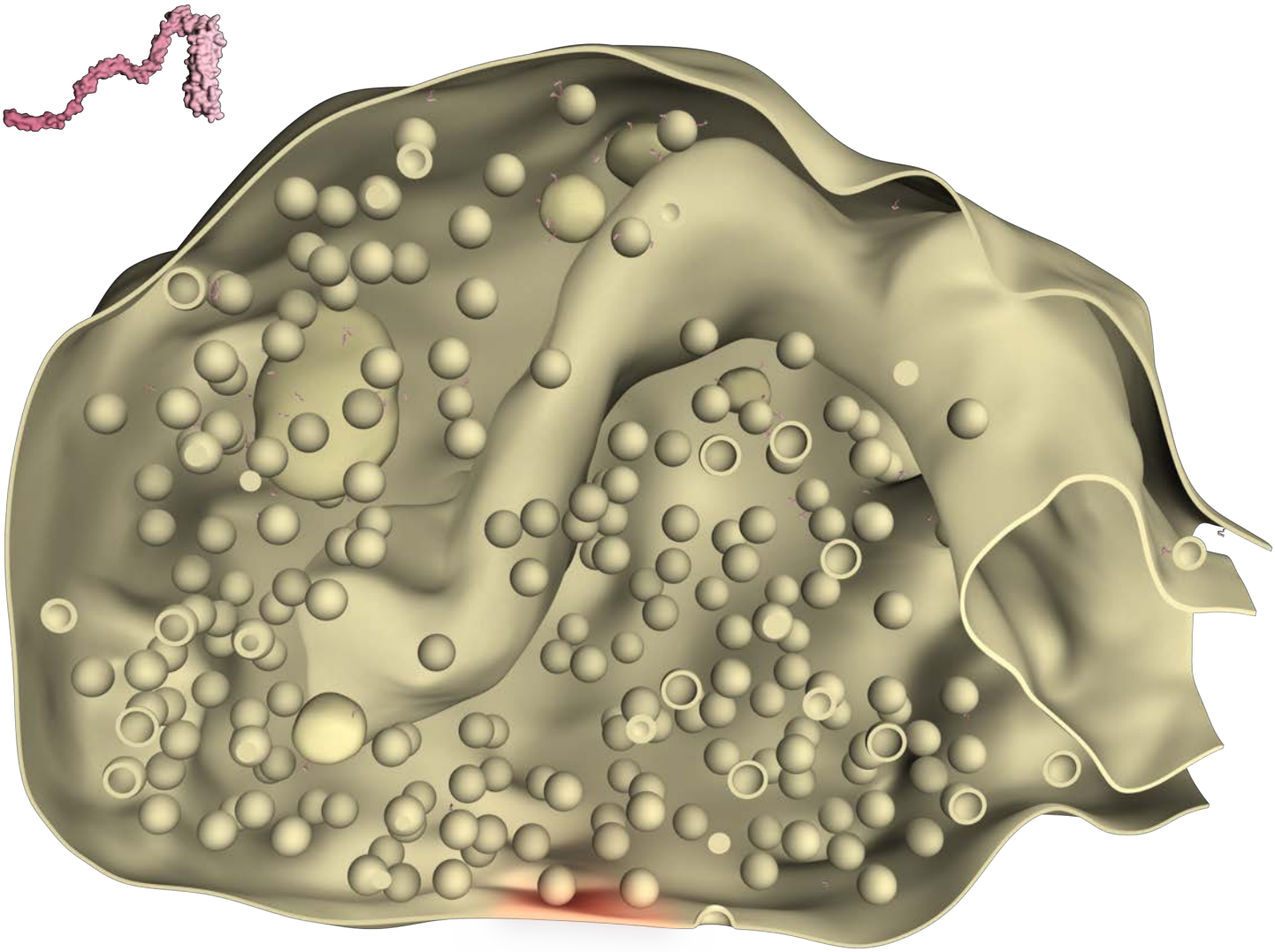
Immunoblots - Synaptic Systems (Göttingen, Germany), 110 062
Synaptosome stainings - BD Biosciences (Heidelberg, Germany), 610636
HC stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany)
NMJ stainings - Reinhard Jahn (MPI-BPC Göttingen, Germany)

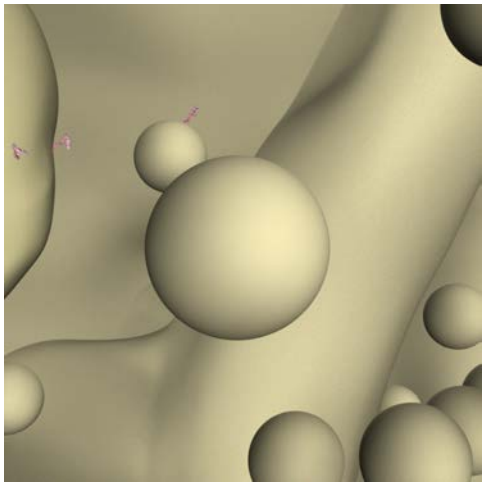
References:

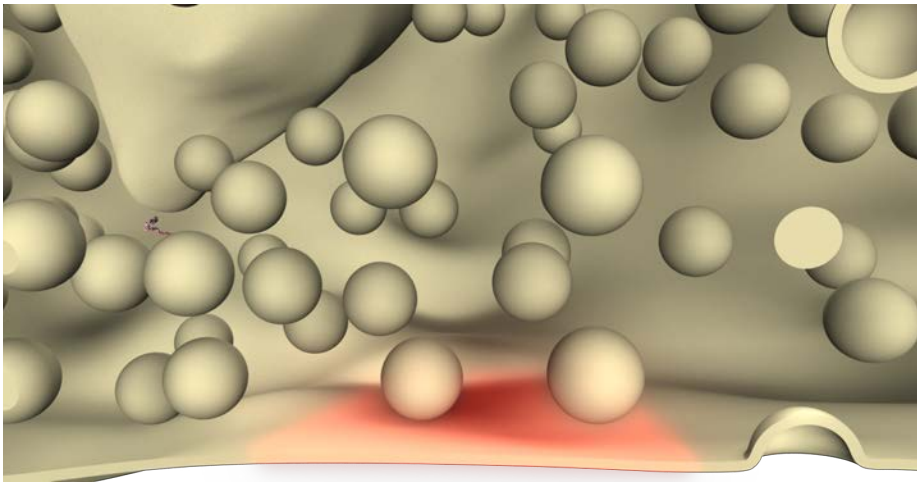
PDB-Identifier (structural information): 1lvf.
Jung, J.J., et al. (2012). Traffic 8, 1129-36.
Takamori, S., et al. (2006). Cell 127, 831-46.

Syntaxin 6

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.0058	121.67 ± 8.96	0.81



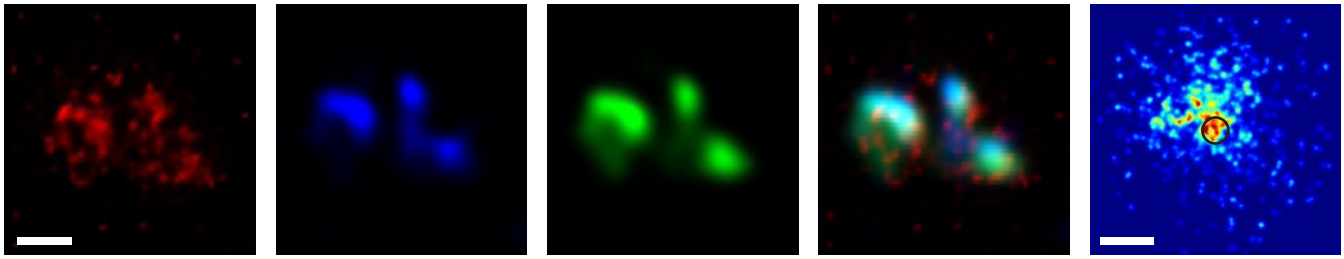




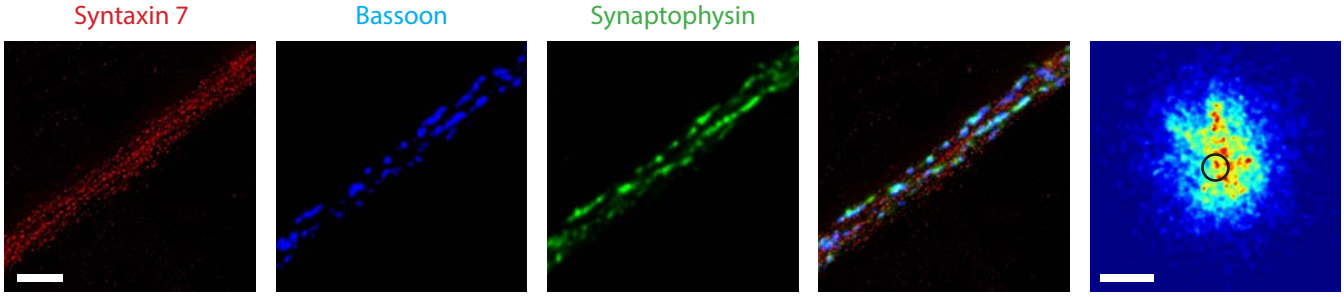
Syntaxin 7

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.0039	78.60 ± 4.45	0.52

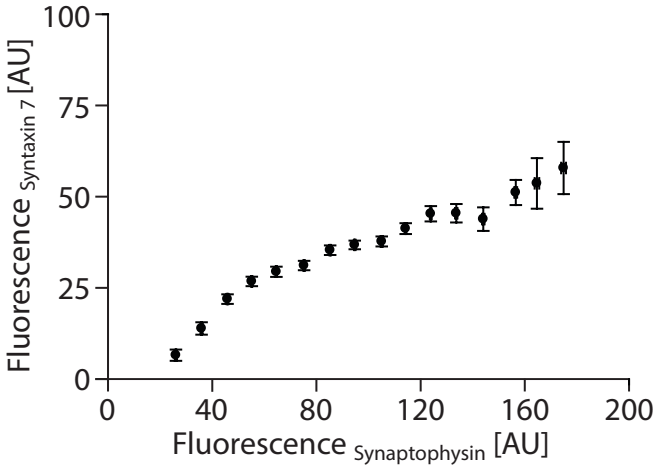
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

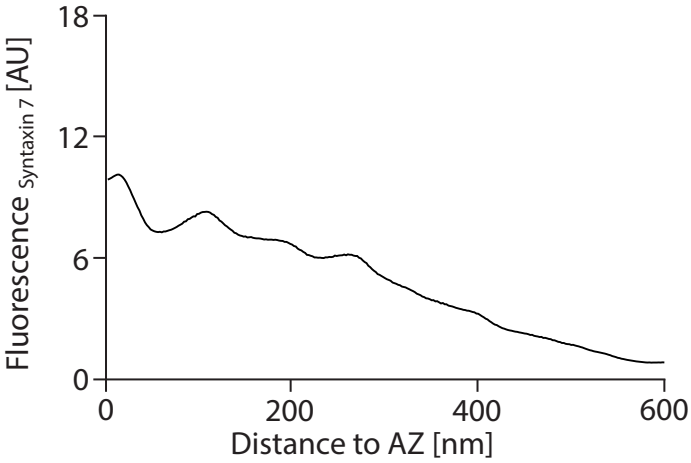


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Syntaxin 7):

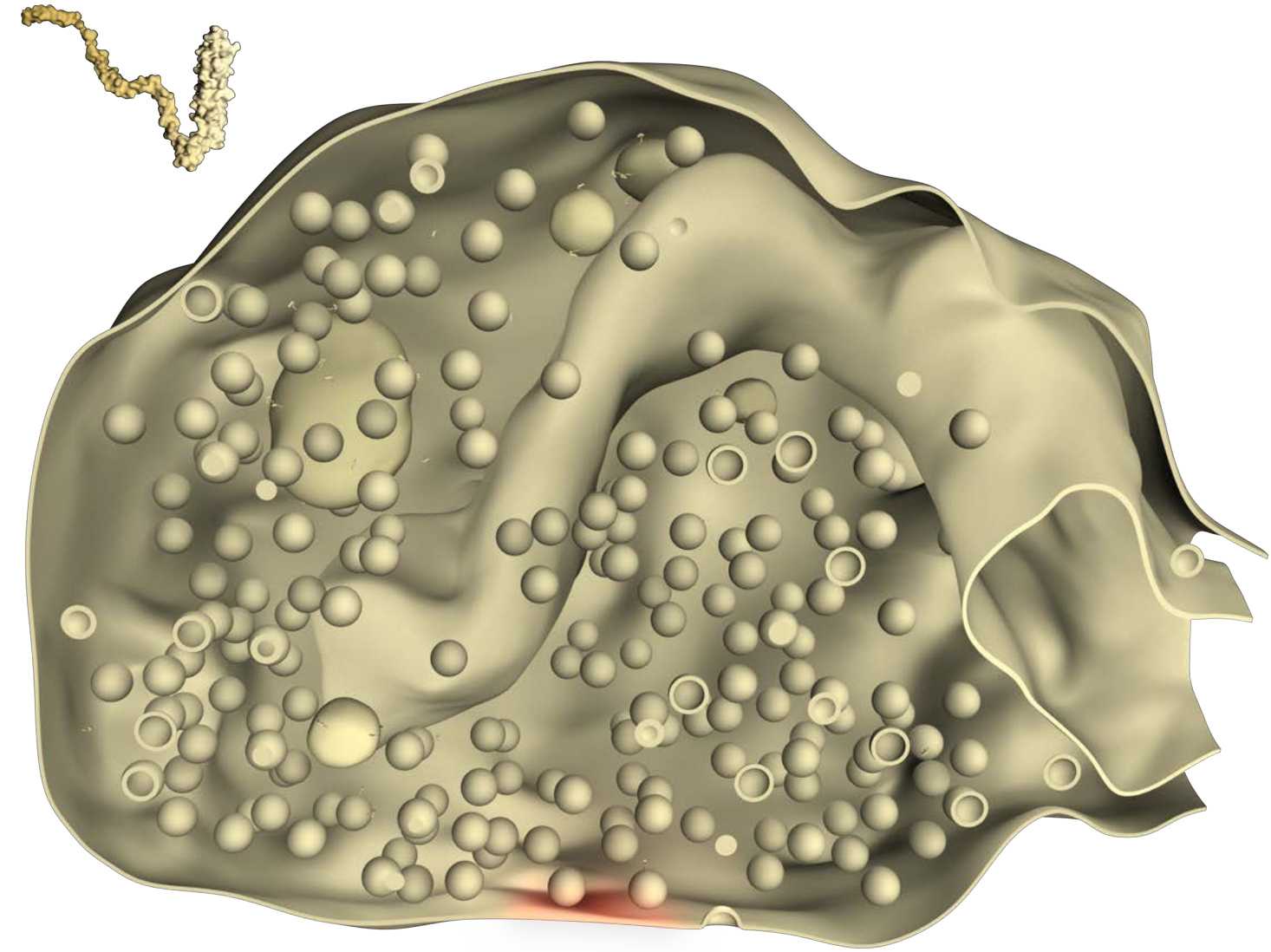
Immunoblots - Synaptic Systems (Göttingen, Germany), 110 072
Synaptosome stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany), 110 072
HC stainings - Synaptic Systems (Göttingen, Germany), 110 072
NMJ stainings - Reinhard Jahn (MPI-BPC, Göttingen, Germany), 110 072

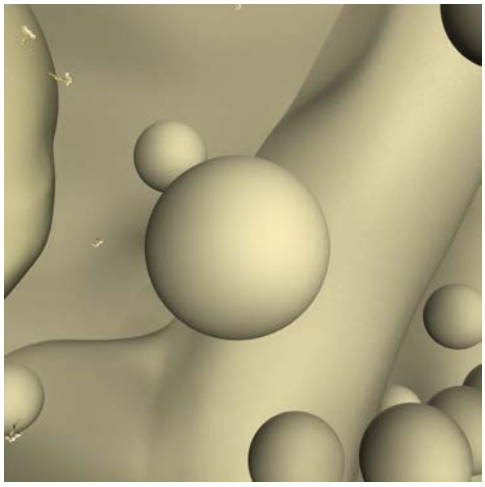
References:

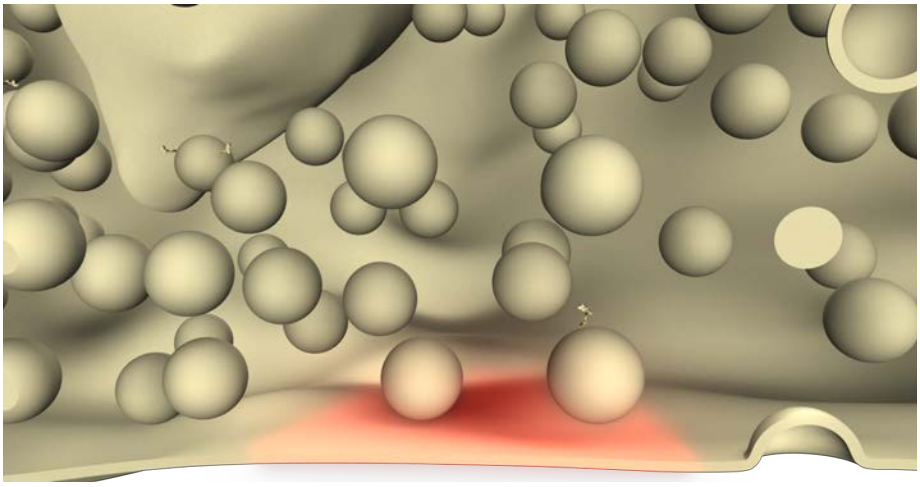
PDB-Identifier (structural information): not available; modeled similarly to syntaxin 1.
Mullock, B.M., et al. (2000). Mol Biol Cell 11, 3137-53.
Schlüter, O.M., et al. (2002). J Biol Chem 277, 40919-29.
Takamori, S., et al. (2006). Cell 127, 831-46.

Syntaxin 7

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.0039	78.60 ± 4.45	0.52



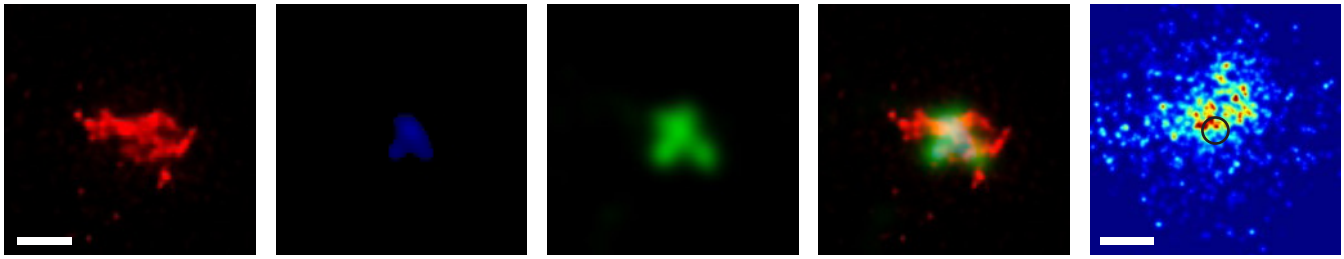




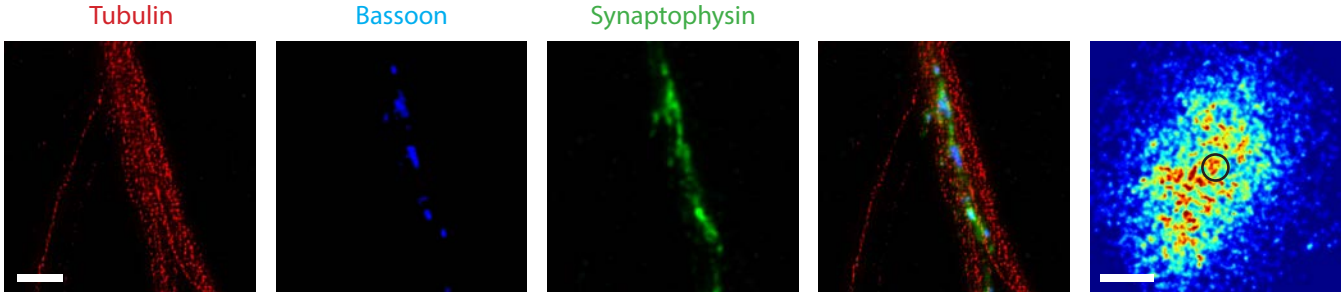
Tubulin

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Cytoskeleton	1.399	12056.00 ± 615.30	80.50

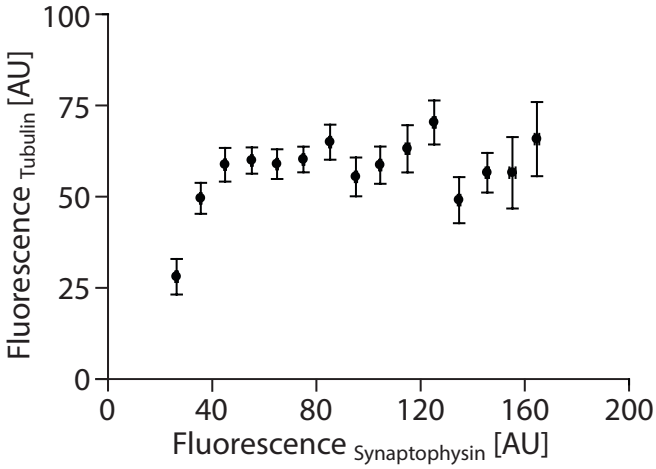
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

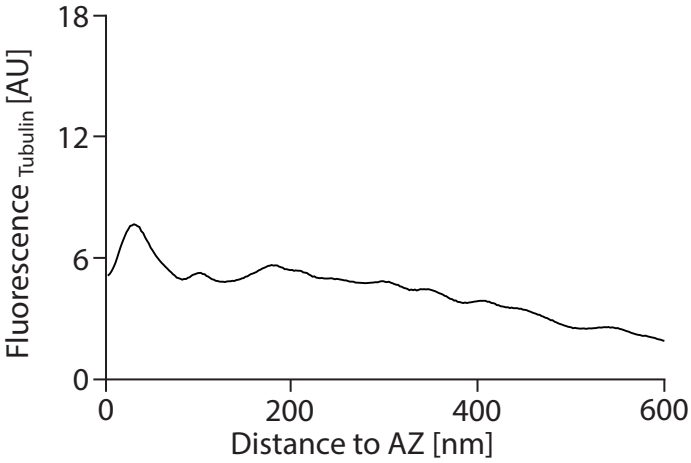


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for Tubulin):

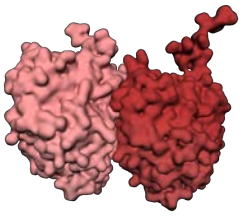
Immunoblots - Synaptic Systems (Göttingen, Germany), 302 203
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 302 203
HC stainings - Synaptic Systems (Göttingen, Germany), 302 203
NMJ stainings - Synaptic Systems (Göttingen, Germany), 302 203

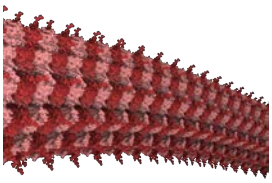
References:

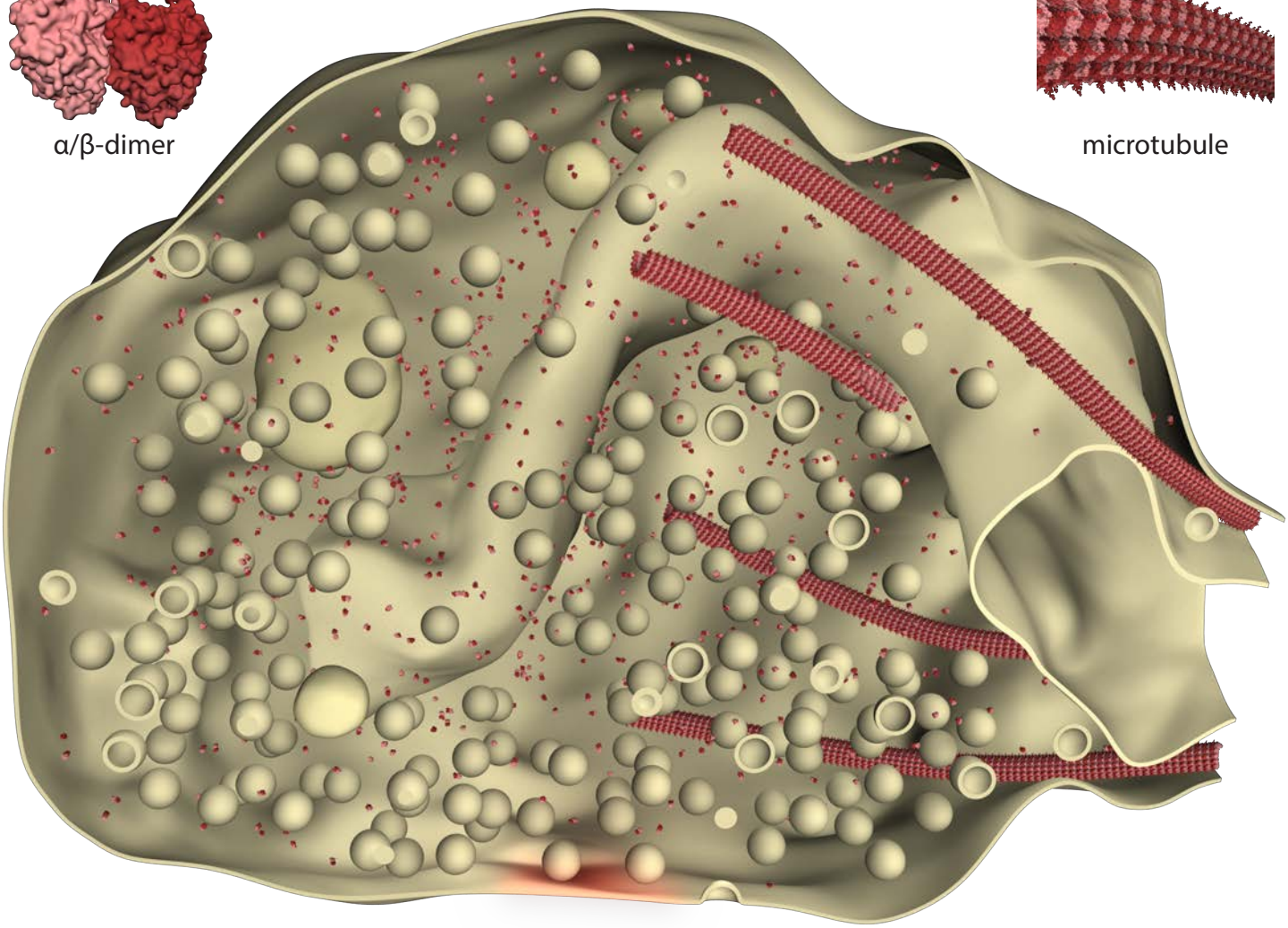
PDB-Identifier (structural information): 1tub.
Hirokawa, N., et al. (1989). J Cell Biol 108, 111-26.
Conde, C. and Caceres, A. (2009). Nat Rev Neurosci 10, 319-32.

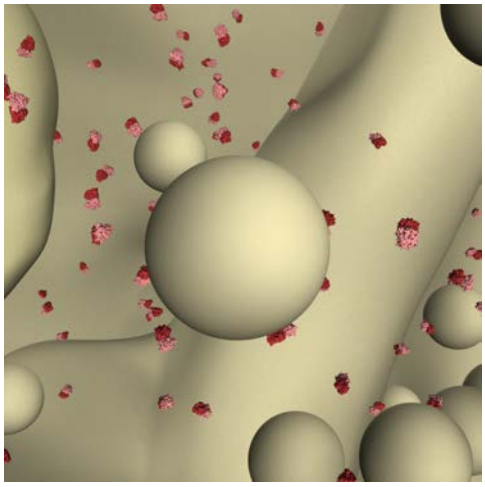
Tubulin

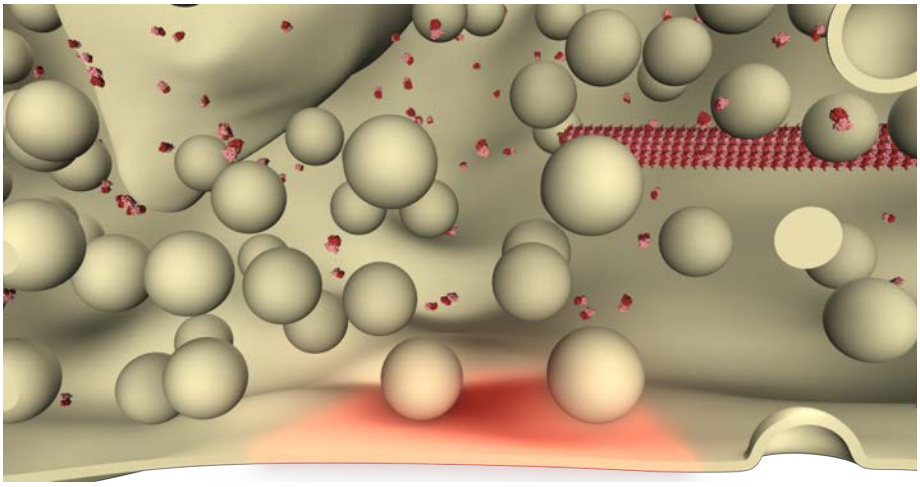
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Cytoskeleton	1.399	12056.00 ± 615.30	80.50









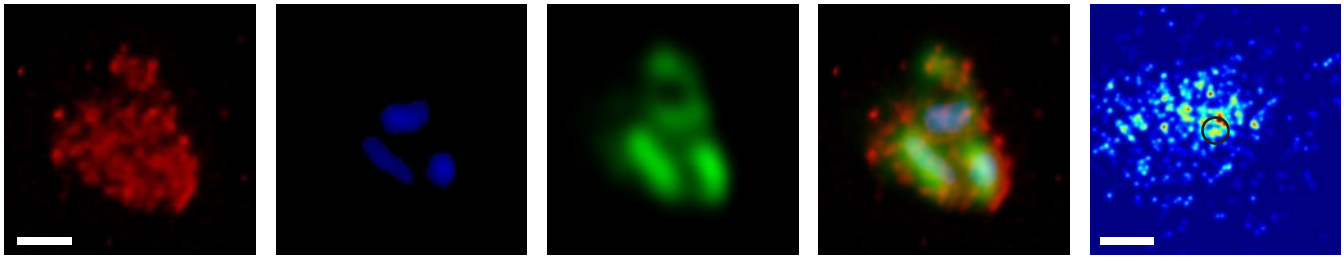


VAMP 1

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.082	3884.30 ± 181.95	25.94

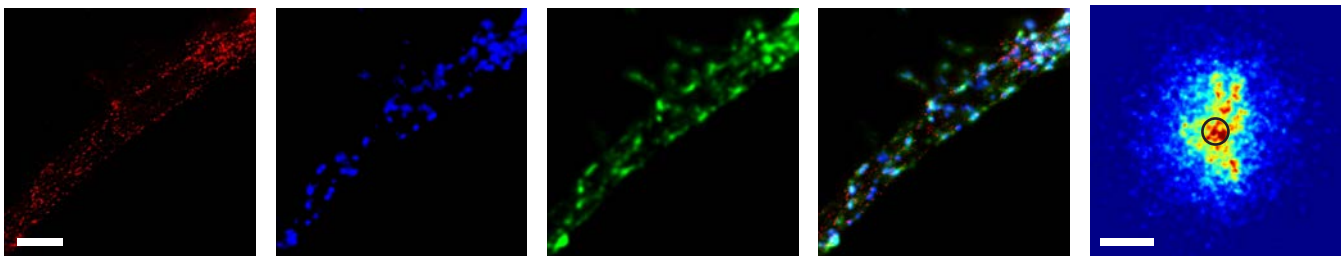
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

VAMP 1 Bassoon Synaptophysin



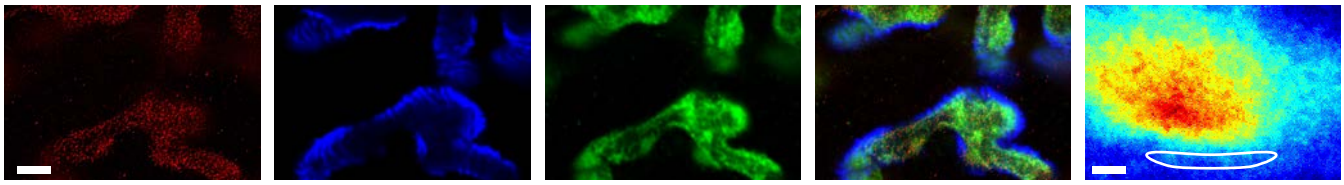
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

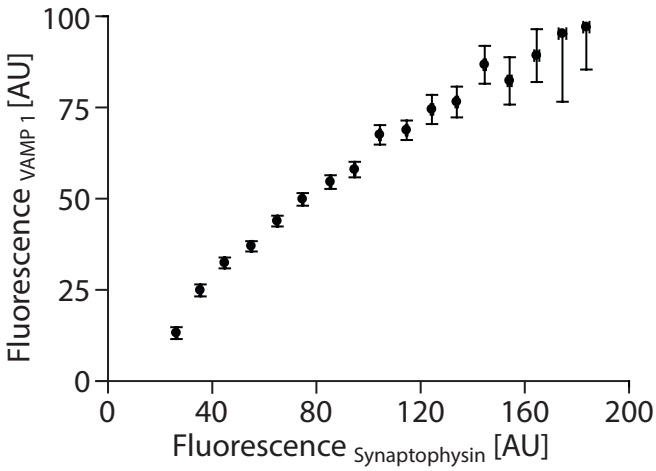
VAMP 1 Bassoon Synaptophysin

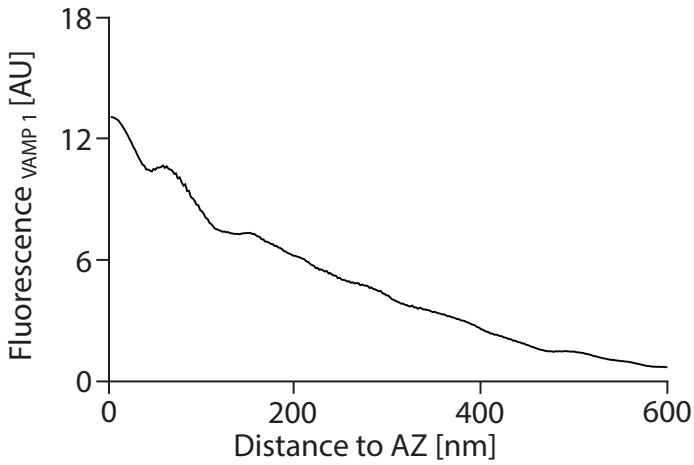


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

VAMP 1 Bungarotoxin Synaptophysin







Antibodies used (for VAMP 1):

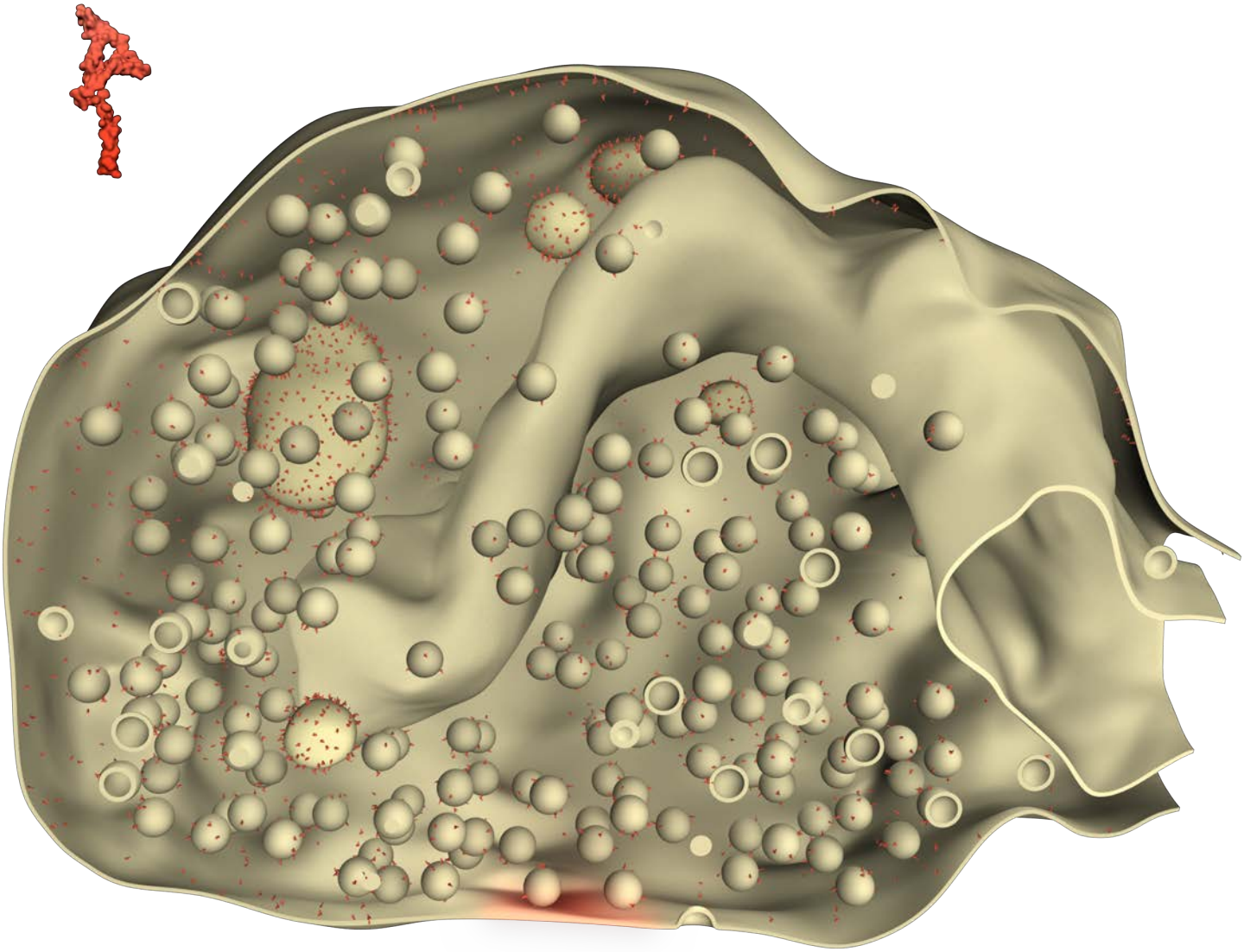
Immunoblots - Synaptic Systems (Göttingen, Germany), 104 002
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 104 002
HC stainings - Synaptic Systems (Göttingen, Germany), 104 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 104 002

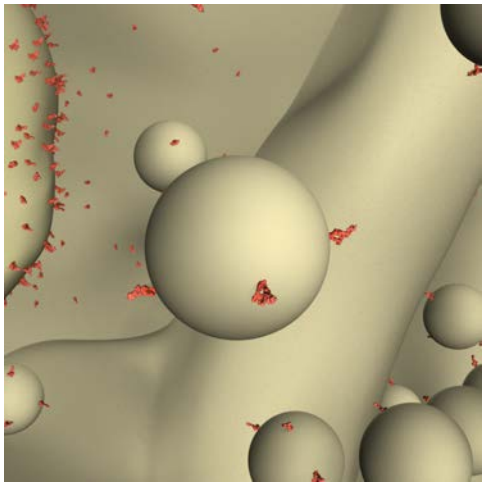
References:

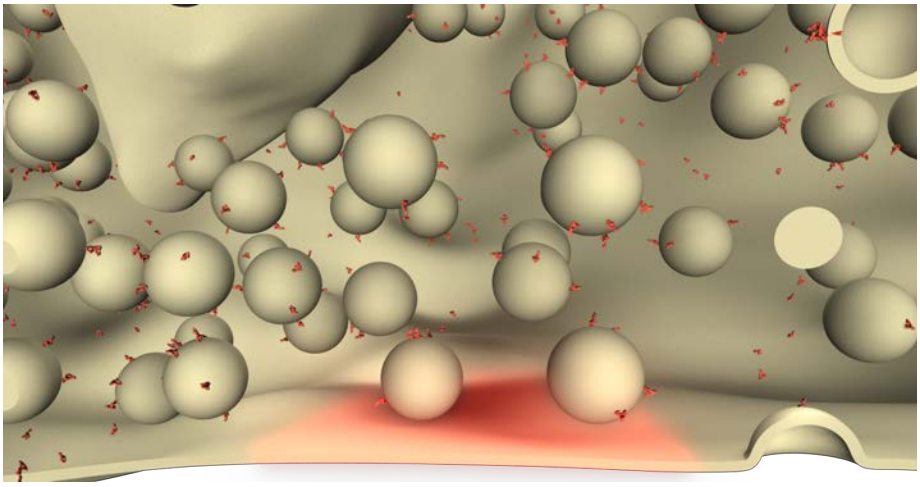
PDB-Identifier (structural information): not available; modeled similarly to VAMP 2.
Trimble, W.S., et al. (1998). Proc Natl Acad Sci U S A 85, 4528-42.
Raptis, A., et al. (2005). J Chem Neuroanat 30, 201-11.
Takamori, S., et al. (2006). Cell 127, 831-46.

VAMP 1

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.082	3884.30 ± 181.95	25.94



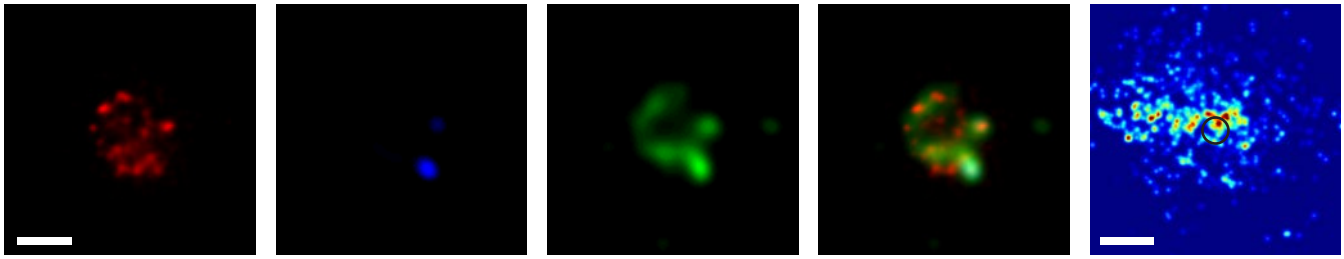




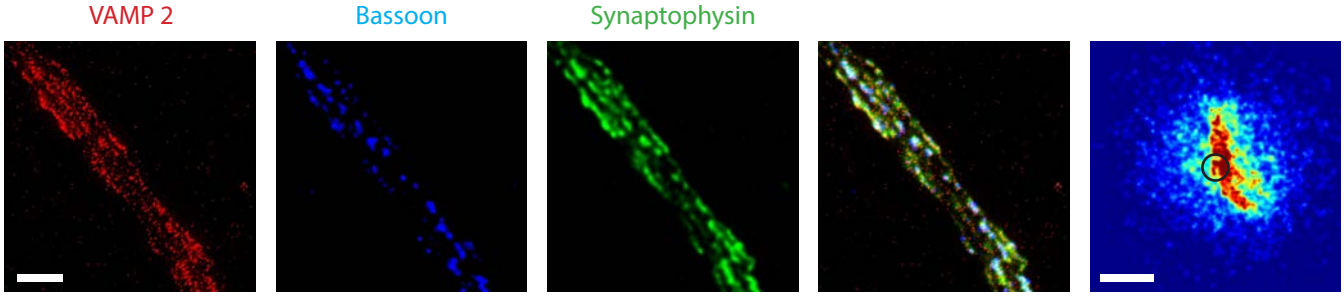
VAMP 2

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.554	26448.00 ± 661.62	176.59

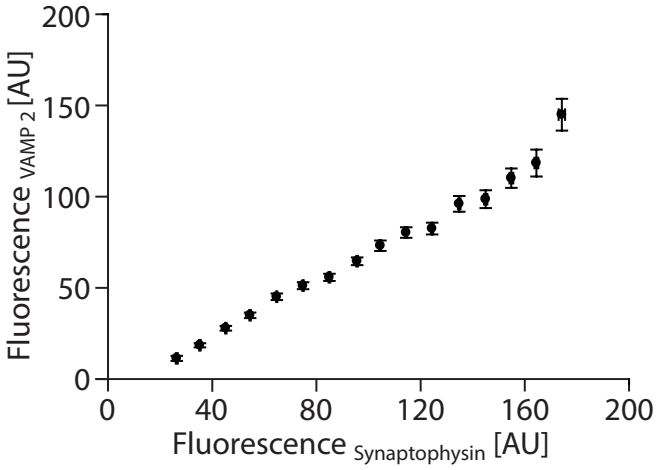
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

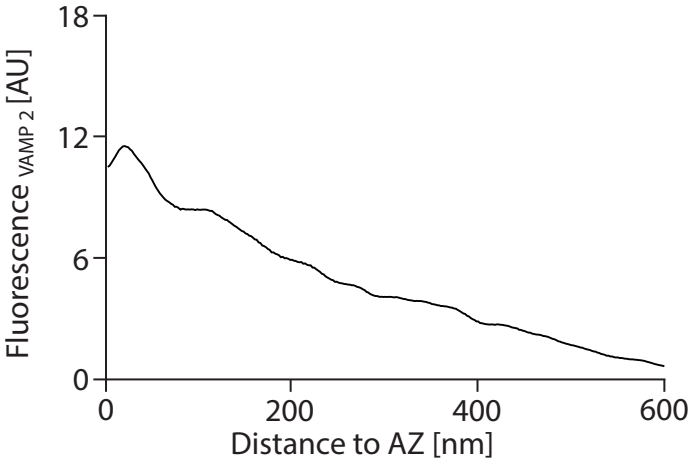


Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)





Antibodies used (for VAMP 2):

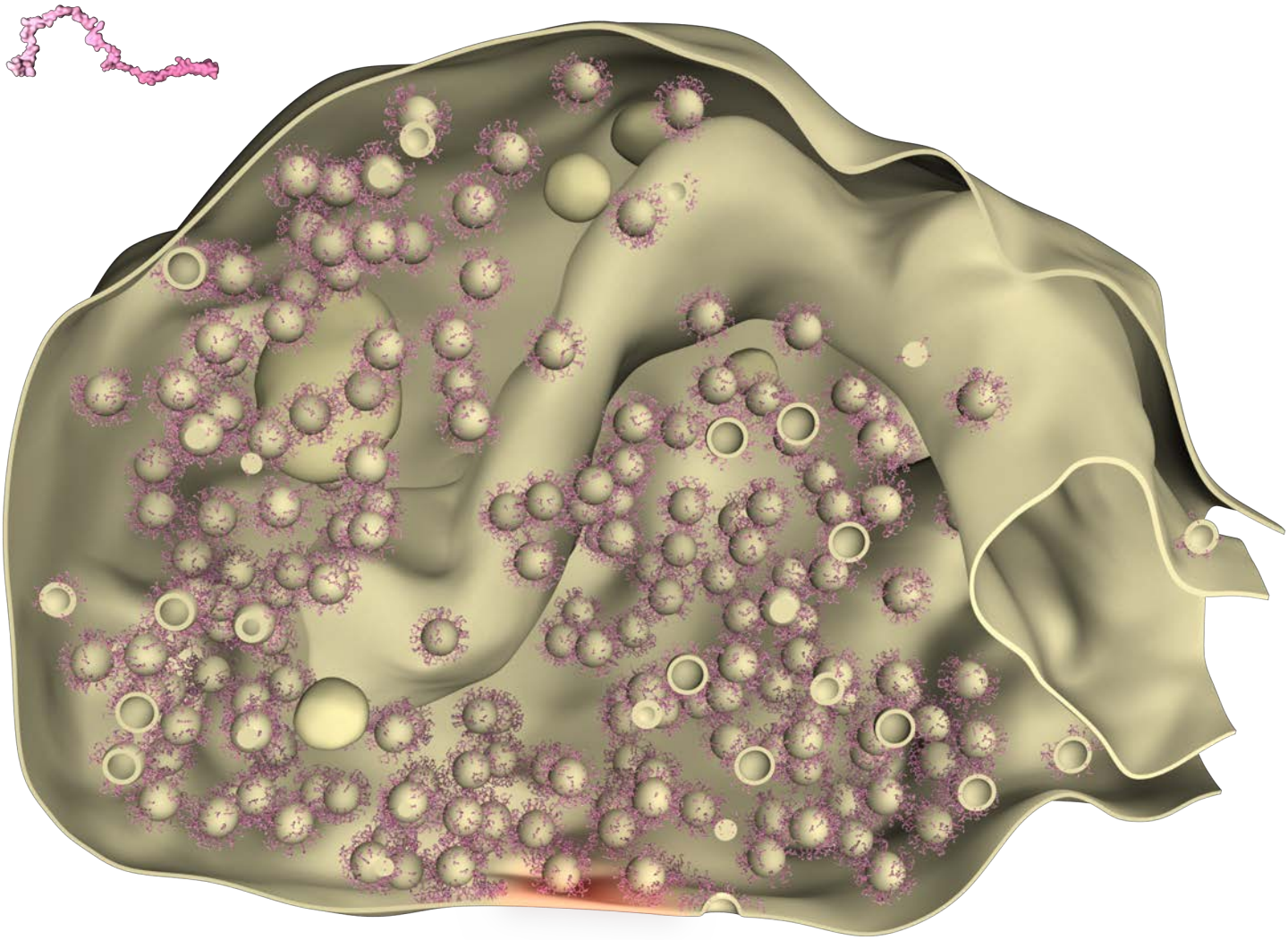
Immunoblots - Synaptic Systems (Göttingen, Germany), 104 211
Slice/synaptosome stainings - Synaptic Systems (Göttingen, Germany), 104 211
HC stainings - Synaptic Systems (Göttingen, Germany), 104 211
NMJ stainings - Synaptic Systems (Göttingen, Germany), 104 102

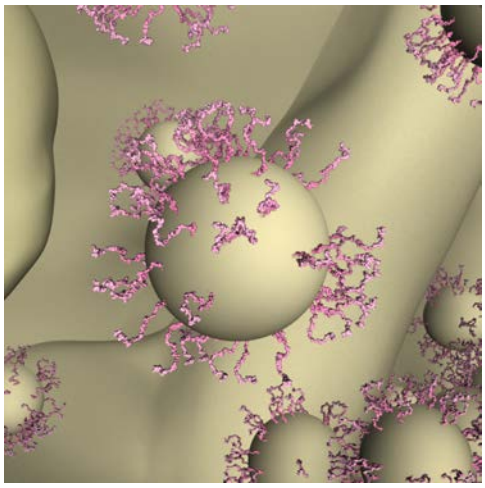
References:

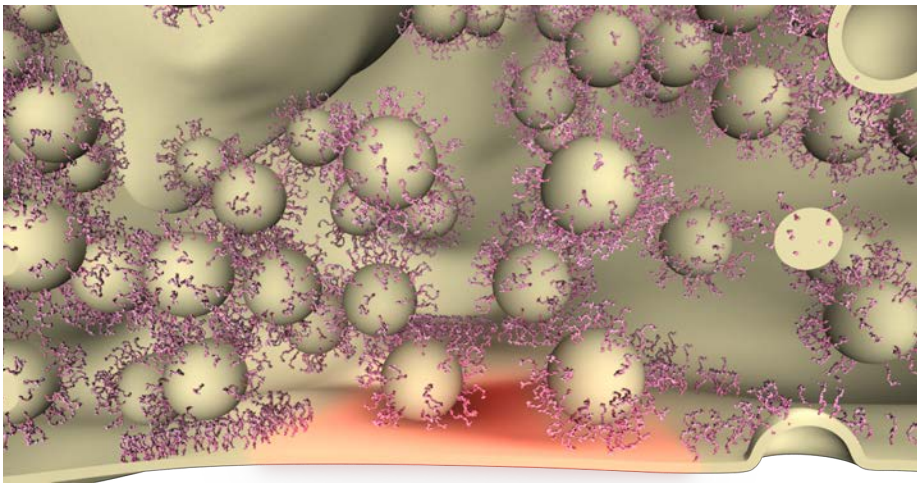
PDB-Identifier (structural information): 2kog.
Baumert, M., et al. (1989). J Cell Biol 110, 1285-94.
Takamori, S., et al. (2006). Cell 127, 831-46.

VAMP 2

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.554	26448.00 ± 661.62	176.59



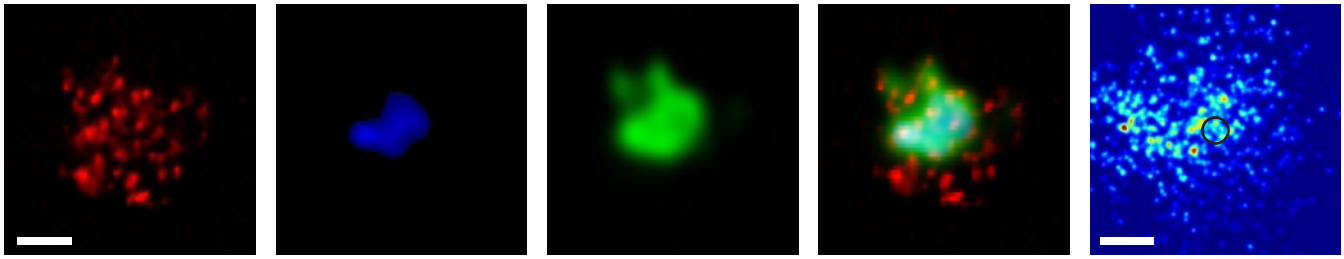




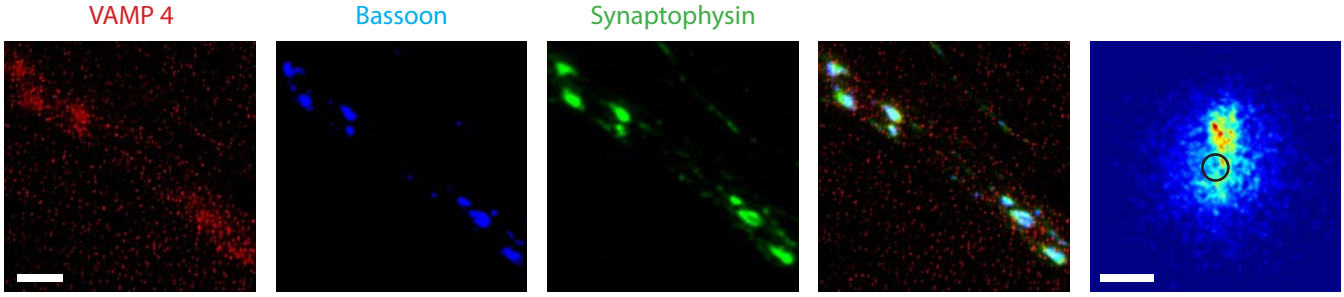
VAMP 4

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.0027	100.59 ± 10.03	0.67

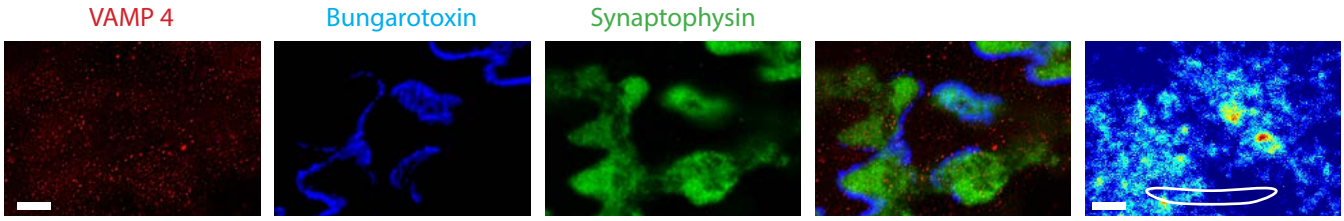
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

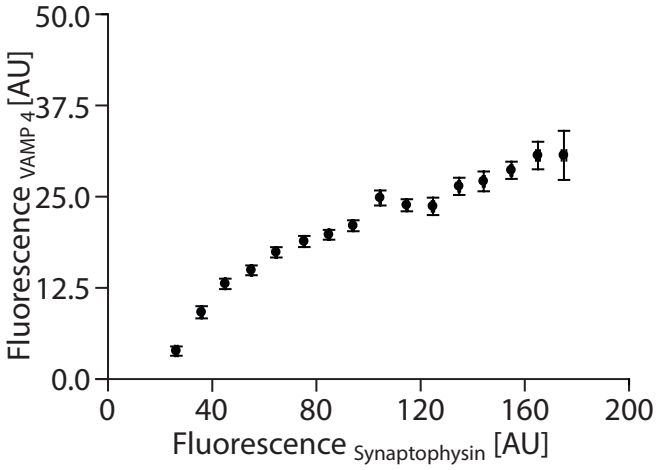


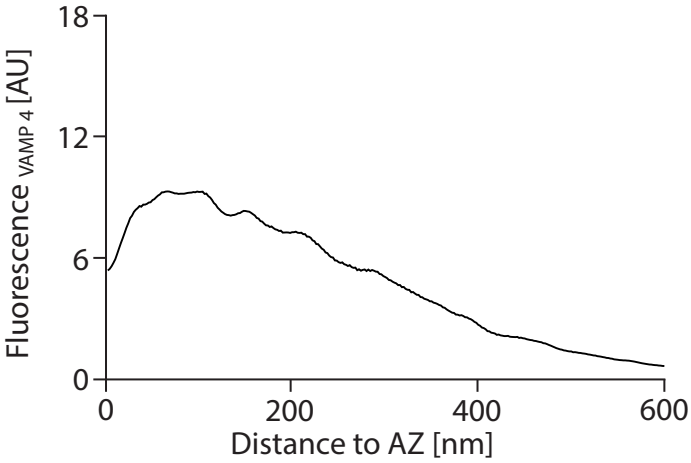
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for VAMP 4):

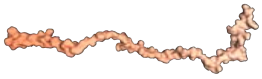
Immunoblots - Synaptic Systems (Göttingen, Germany), 136 002
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 136 002
HC stainings - Synaptic Systems (Göttingen, Germany), 136 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 136 002

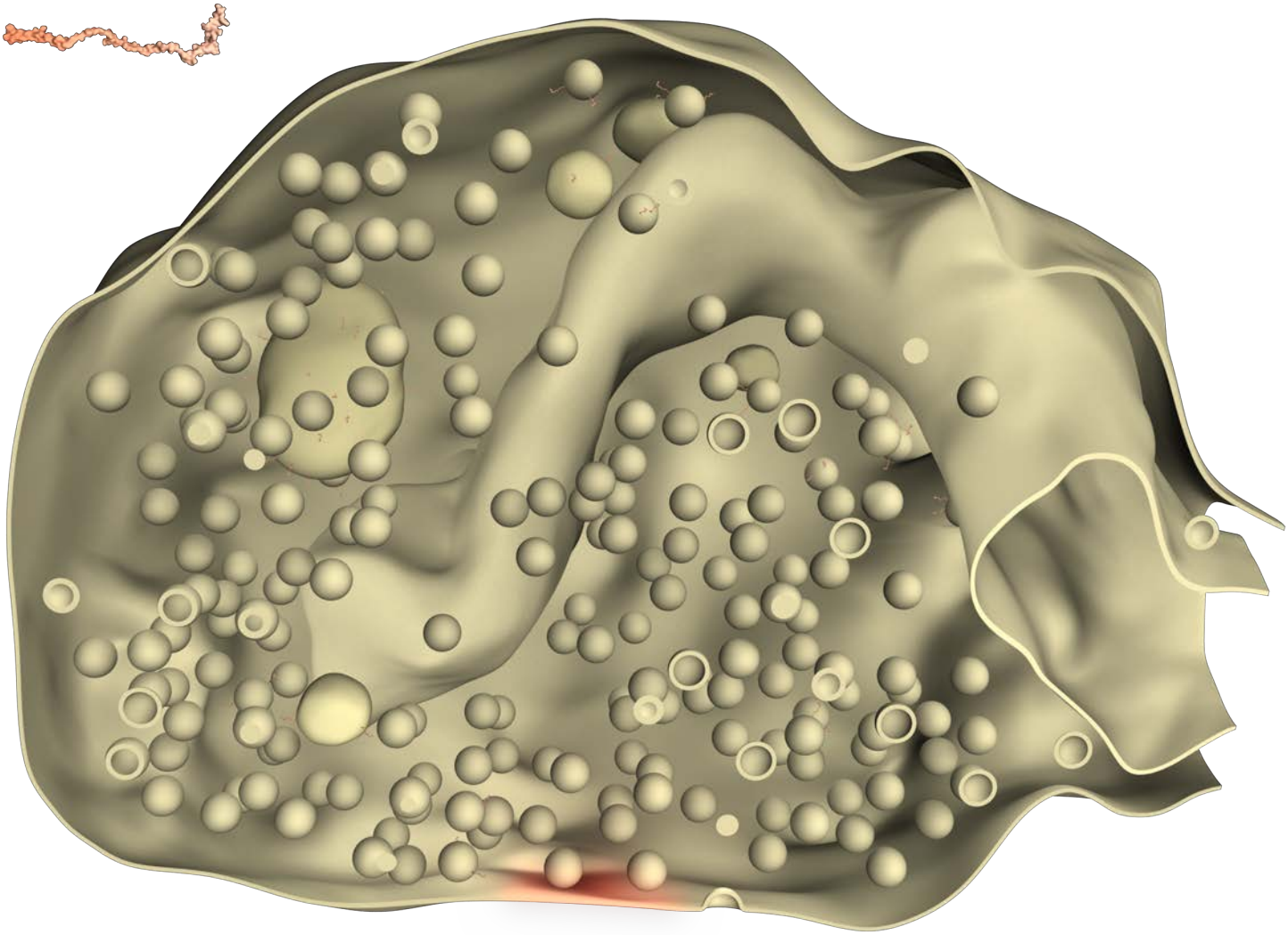
References:

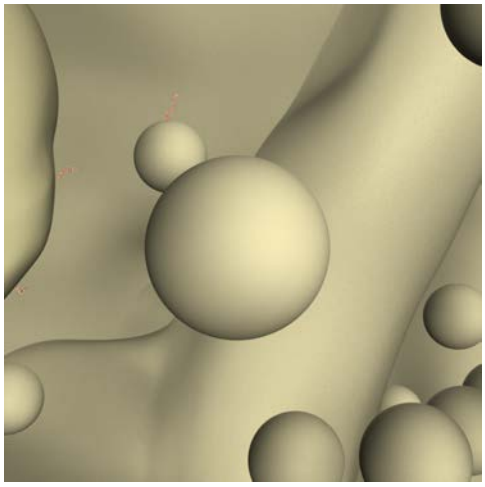
PDB-Identifier (structural information): not available; assembled from individual domains.
Steegmaier, M., et al. (1999). Mol Biol Cell 10, 1957-72.
Mallard, F., et al. (2002). J Cell Biol 156, 653-64.
Raingo, J., et al. (2012). Nat Neurosci 15, 738-45.
Takamori, S., et al. (2006). Cell 127, 831-46.

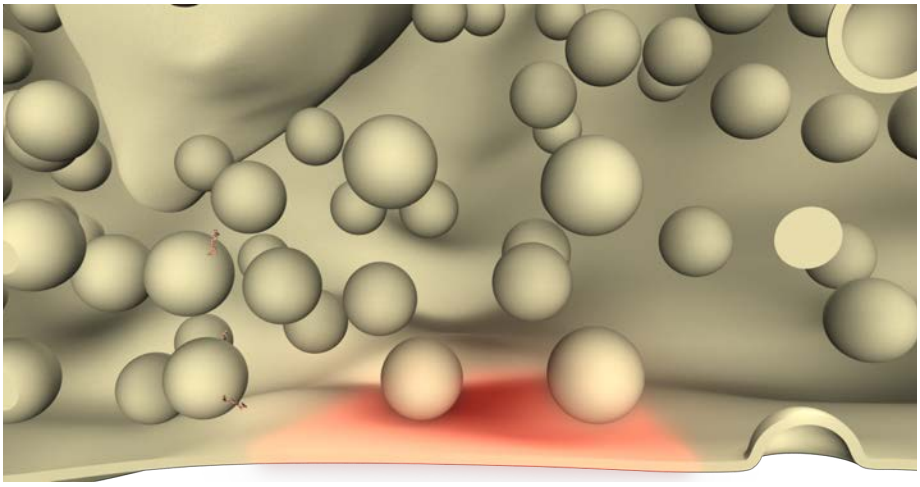
VAMP 4

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.0027	100.59 ± 10.03	0.67







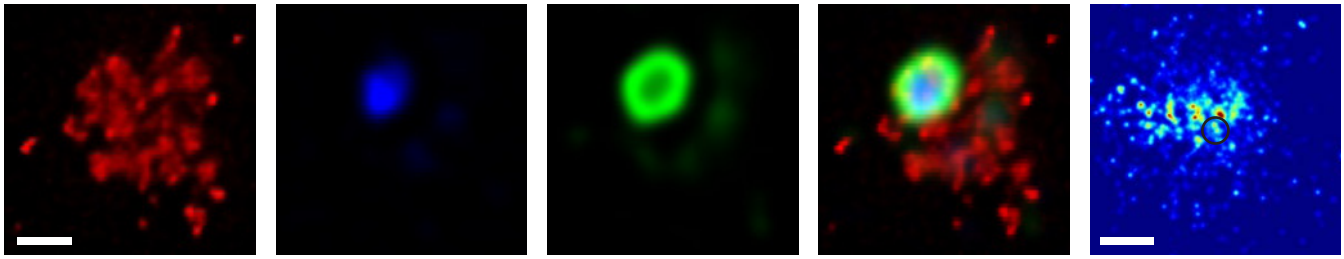


vATPase (a1)

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Proton pump	0.118	742.37 ± 32.97	4.958

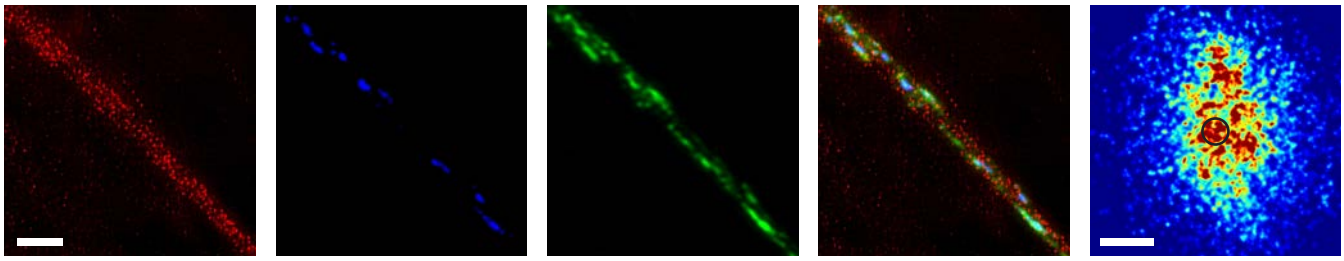
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

vATPase (a1) Bassoon Synaptophysin



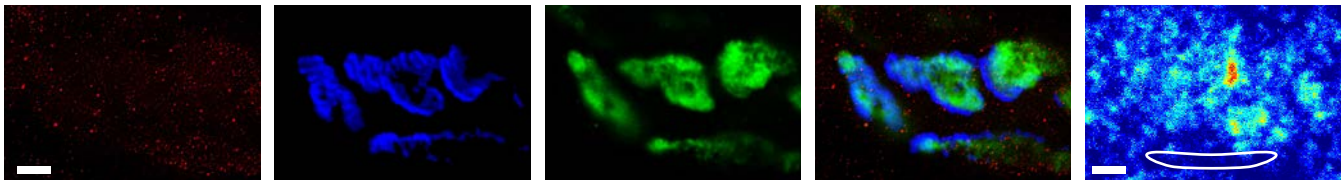
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

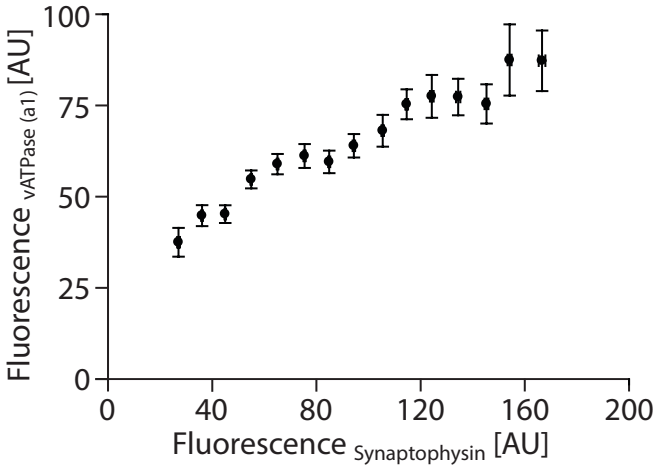
vATPase (a1) Bassoon Synaptophysin

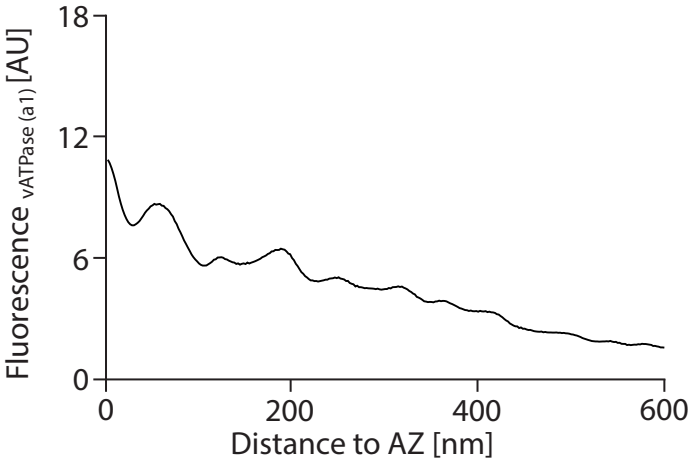


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

vATPase (a1) Bungarotoxin Synaptophysin







Antibodies used (for vATPase):

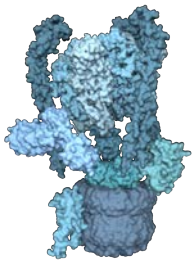
Immunoblots - Santa Cruz (Heidelberg, Germany), sc-28801
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 109 002
HC stainings - Synaptic Systems (Göttingen, Germany), 109 002
NMJ stainings - Synaptic Systems (Göttingen, Germany), 109 002

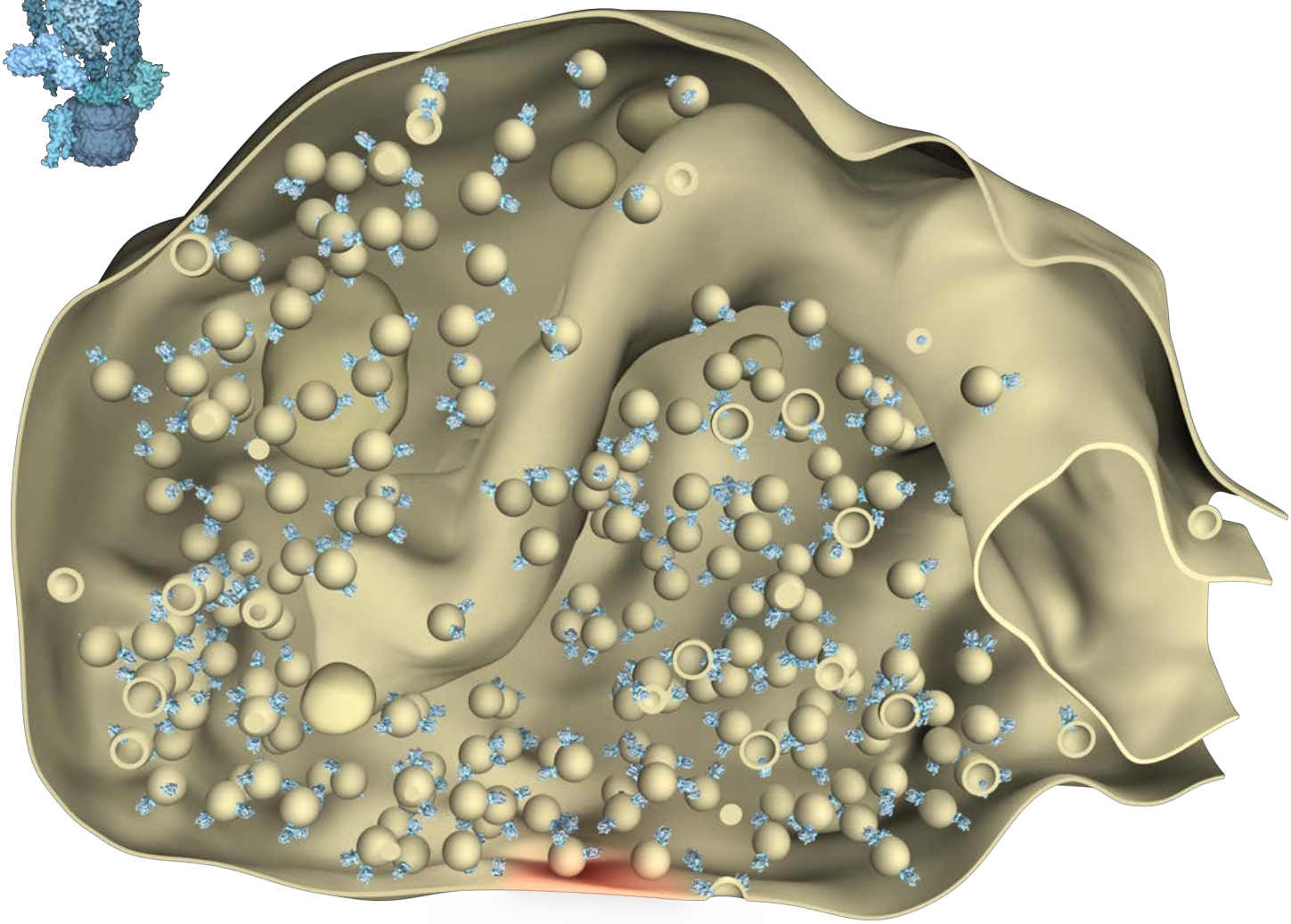
References:

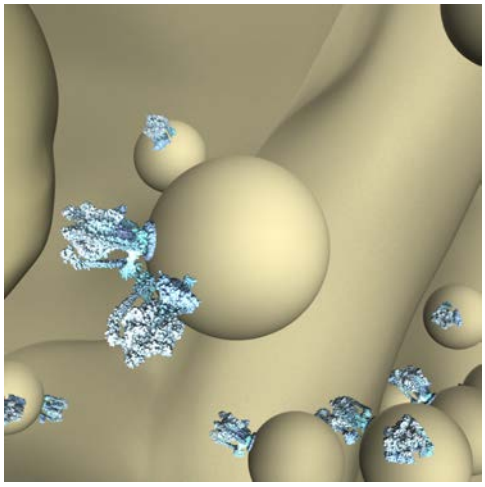
PDB-Identifier (structural information): 1ho8, 1r5z, 1u7l, 3j0j, 4dlo, 1c17, 3rrk, 2bl2.
Perin, M.S., et al. (1991). J Biol Chem 266, 3877-81.
Takamori, S., et al. (2006). Cell 127, 831-46.
Oot, R.A., et al. (2012). Structure 20, 1881-92.
Kitagawa, N., et al. (2008). J Biol Chem 283, 3329-37.

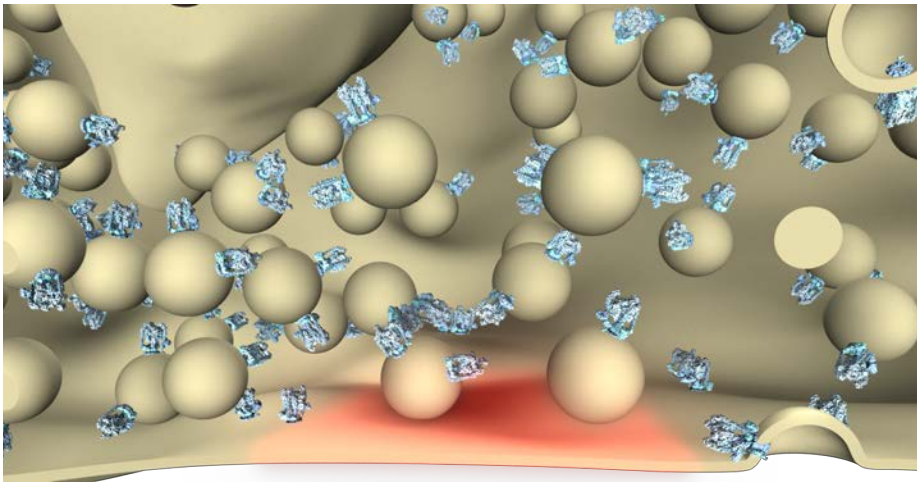
vATPase (a1)

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Proton pump	0.118	742.37 ± 32.97	4.958







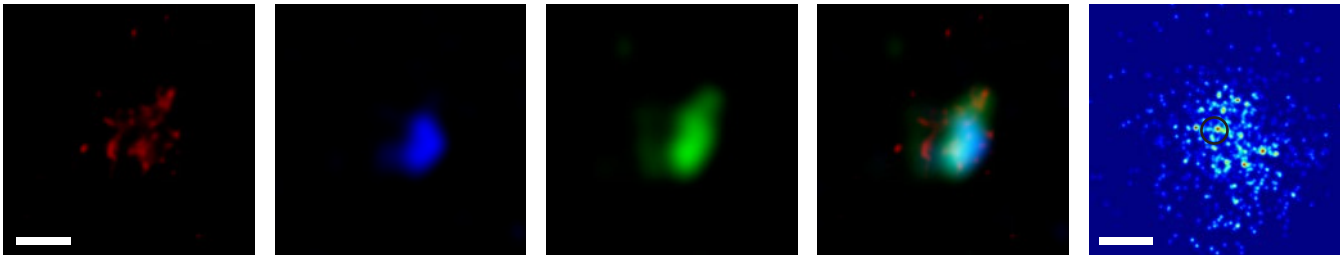


VDAC 1,2,3

Category	% of total protein	Molecules/Synapse	Molarity [µM]
Mitochondrial	1.982	14422.99 ± 720.71	260.87

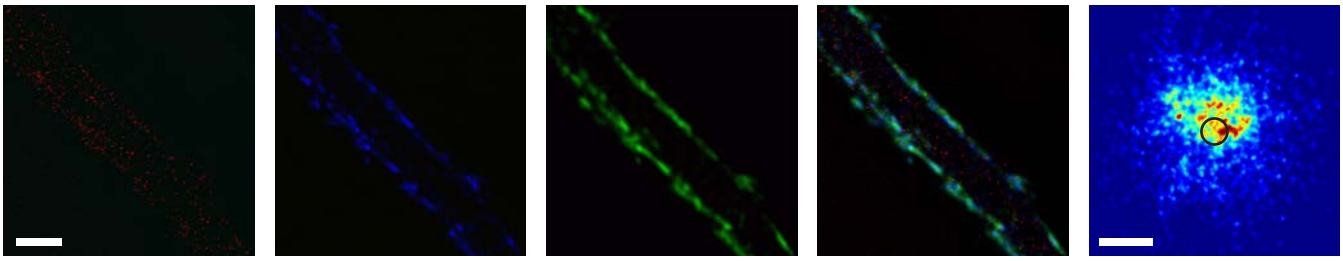
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

VDAC 1,2,3 Bassoon Synaptophysin



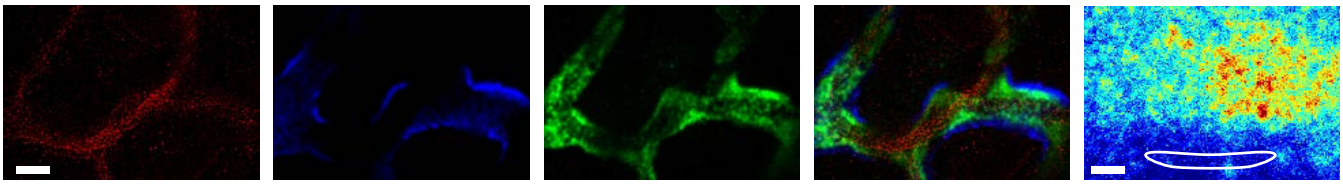
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)

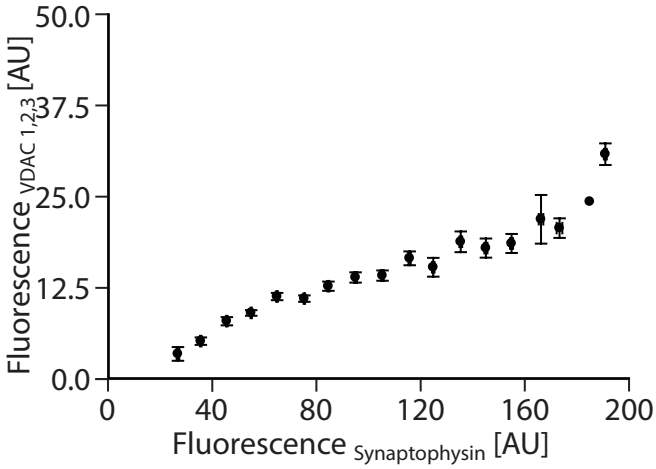
VDAC 1,2,3 Bassoon Synaptophysin

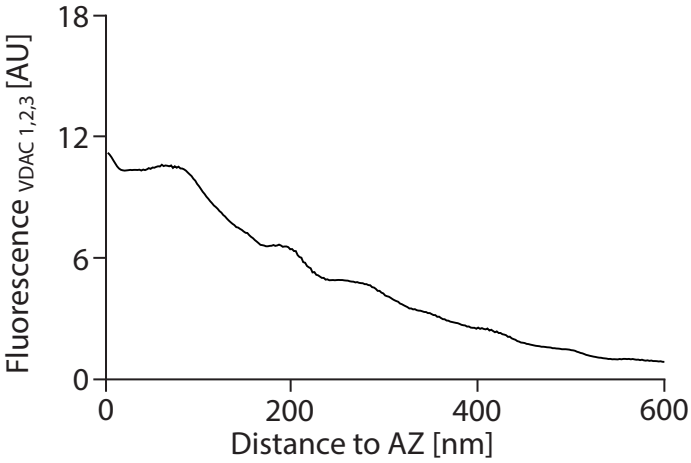


Neuromuscular junction (*levator auris longus*, *Mus musculus*)

VDAC 1,2,3 Bungarotoxin Synaptophysin







Antibodies used (for VDAC 1,2,3):

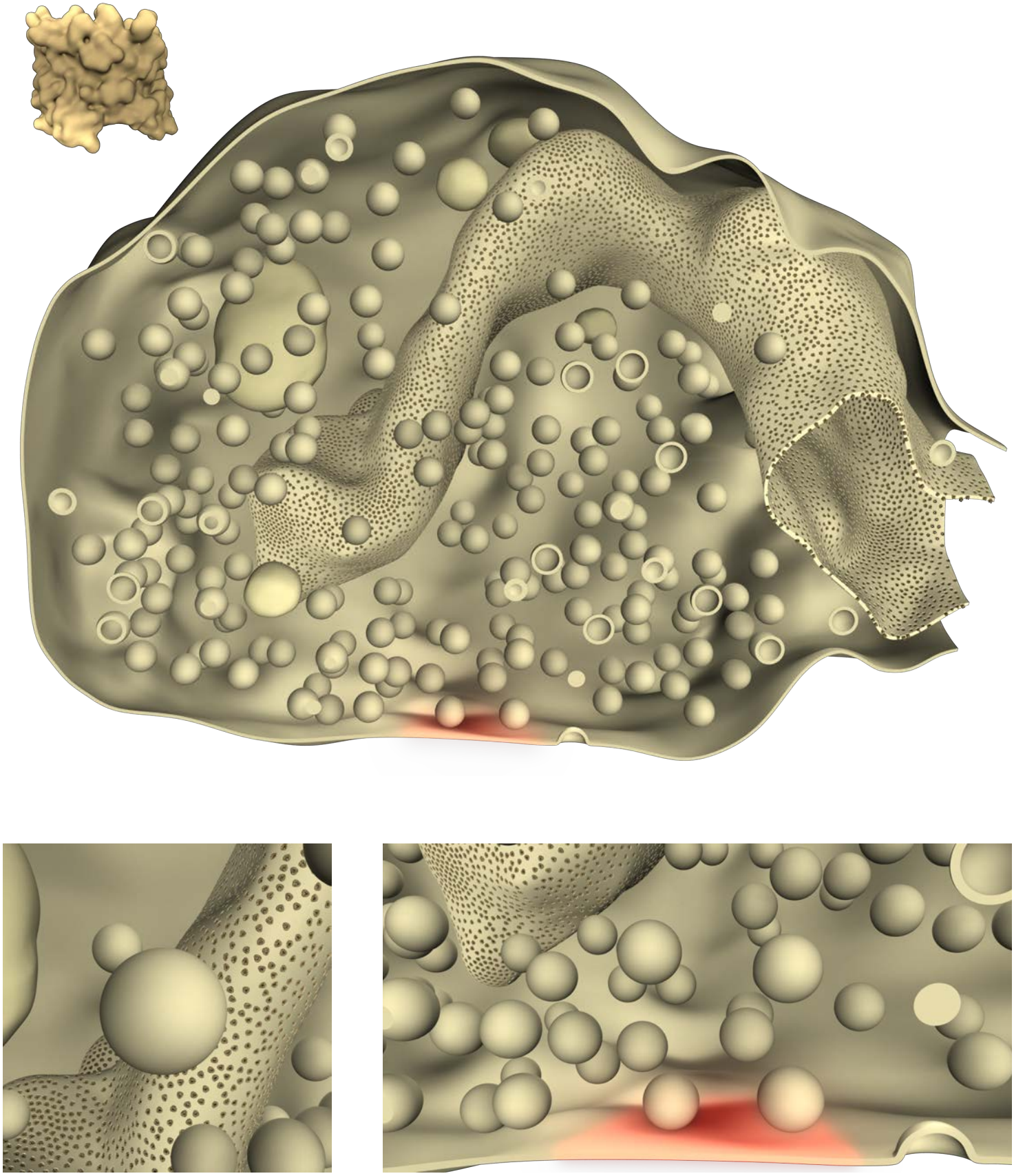
Immunoblots - Abcam (Cambridge, England), ab15895
Synaptosome stainings - Santa Cruz (Heidelberg, Germany), sc-98708
HC stainings - Santa Cruz (Heidelberg, Germany), sc-98708
NMJ stainings - Santa Cruz (Heidelberg, Germany), sc-98708

References:

PDB-Identifier (structural information): 3emn.
Ujwal, R., et al. (2008). Proc Natl Acad Sci USA 105, 17742-7.
Neumann D., et al. (2010). PMC Biophys 3, 4.

VDAC 1,2,3

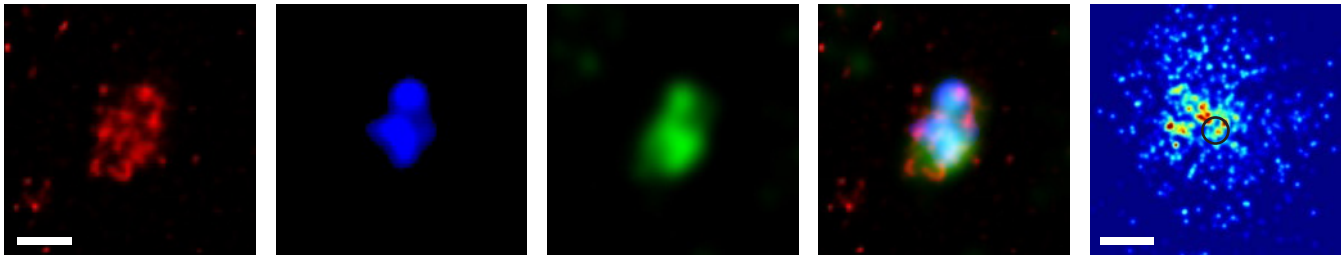
Category	% of total protein	Molecules/Synapse	Molarity [μM]
Mitochondrial	1.982	14422.99 ± 720.71	260.87



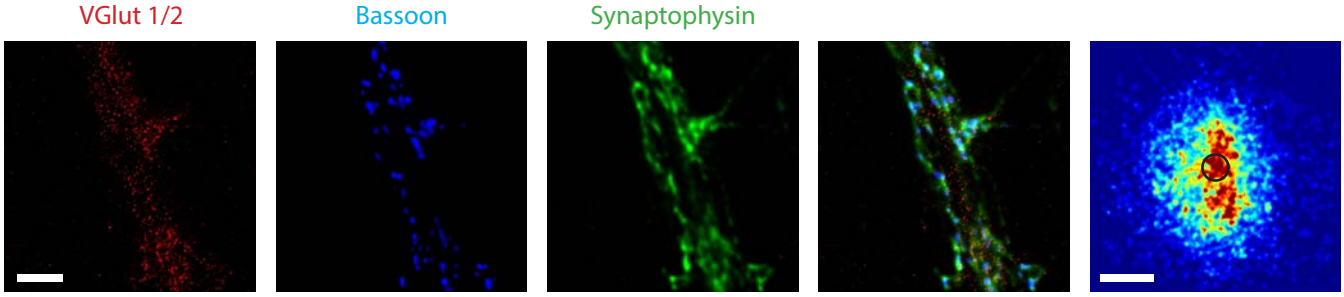
VGlut 1/2

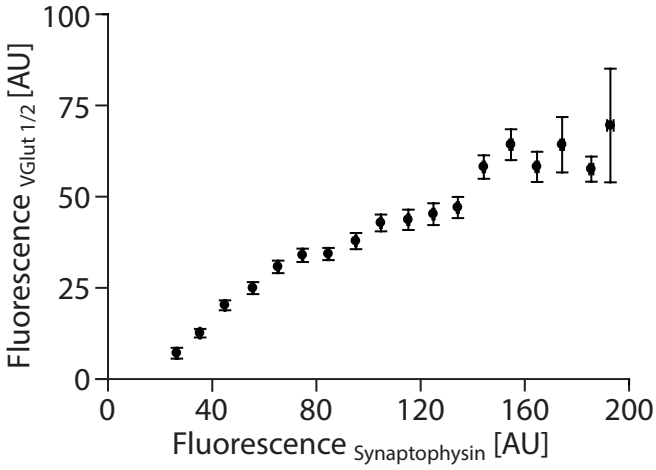
Category	% of total protein	Molecules/Synapse	Molarity [µM]
Transporter	0.840	8254.10 ± 224.30	55.11

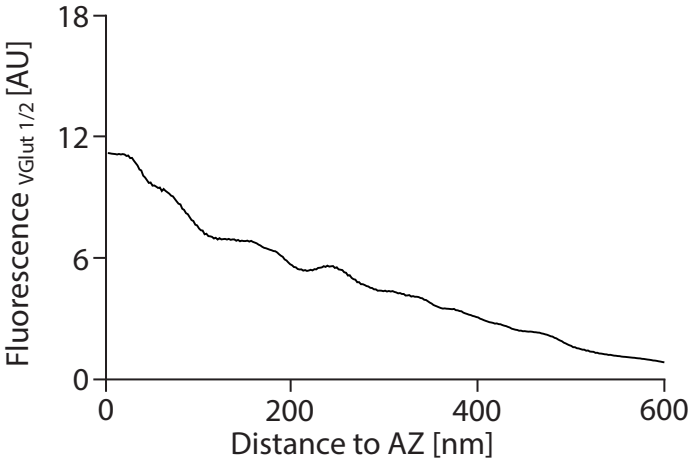
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)



Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)







Antibodies used (for VGlut 1/2):

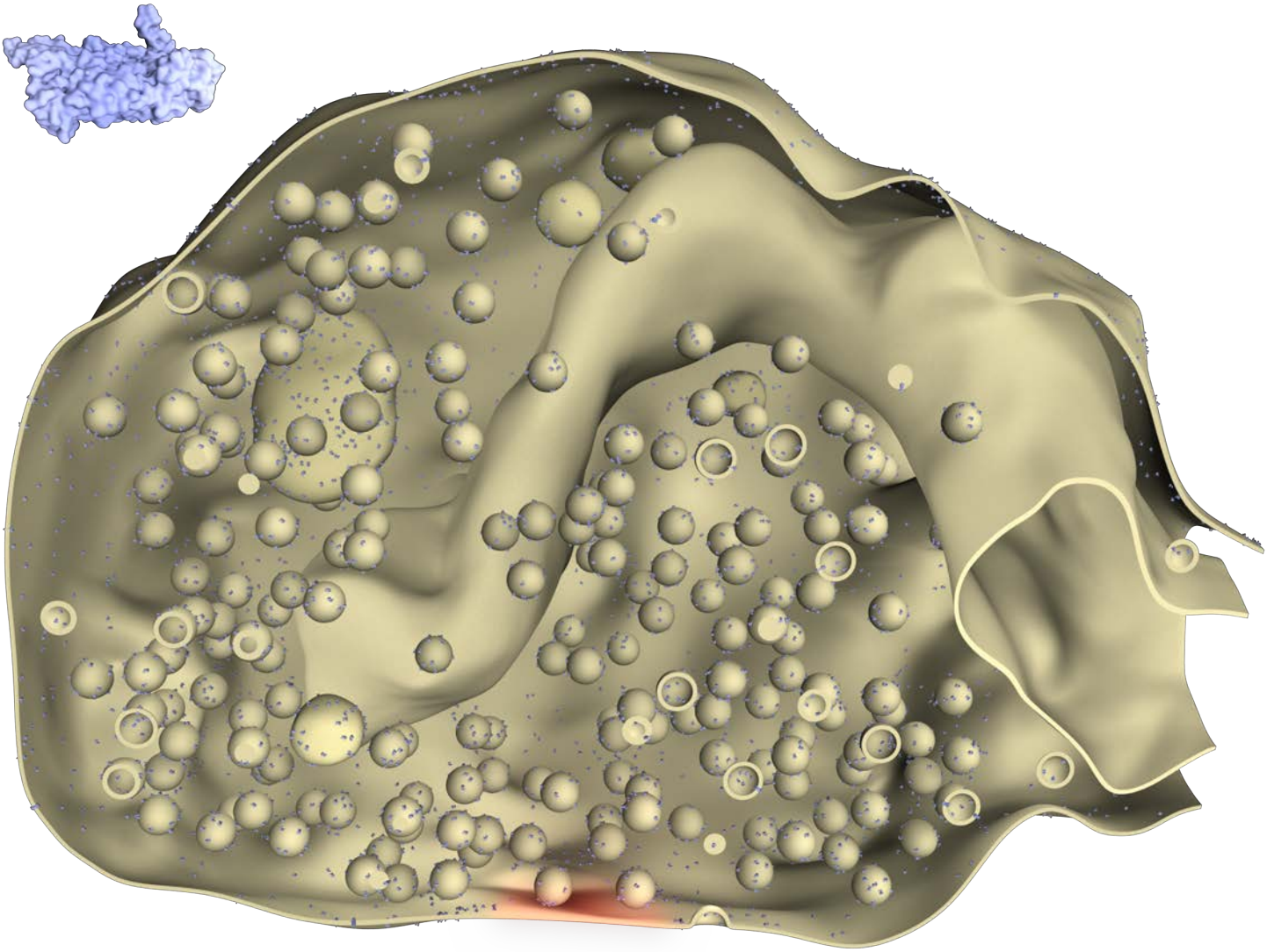
Immunoblots - Synaptic Systems (Göttingen, Germany), 135 503
Synaptosome stainings - Synaptic Systems (Göttingen, Germany), 135 503
HC stainings - Synaptic Systems (Göttingen, Germany), 135 503
NMJ stainings - not applicable

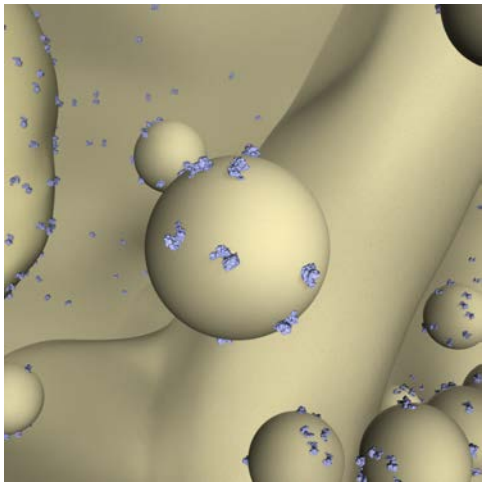
References:

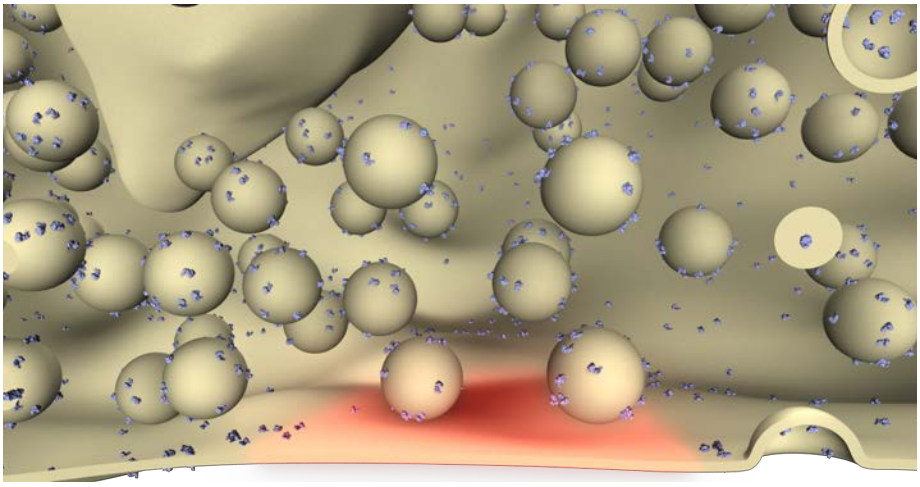
PDB-Identifier (structural information): 1xfh.
Bellocchio, F., et al. (2000). Science 289, 957-60.
Takamori, S., et al. (2006). Cell 127, 831-46.

VGlut 1/2

Category	% of total protein	Molecules/Synapse	Molarity [μM]
Transporter	0.840	8254.10 ± 224.30	55.11



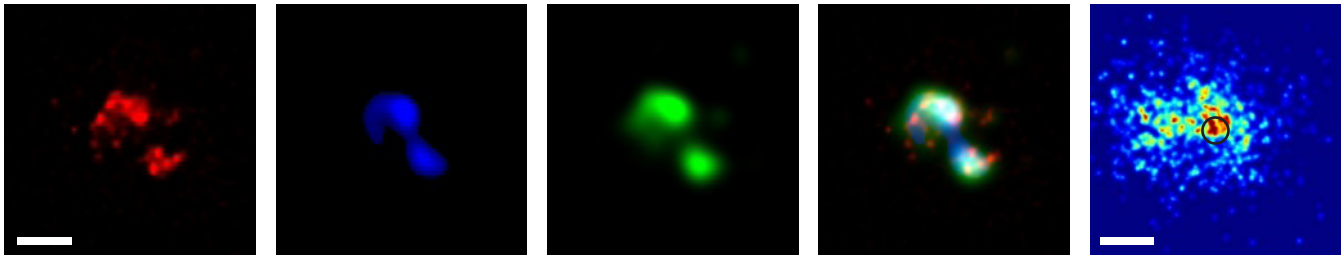




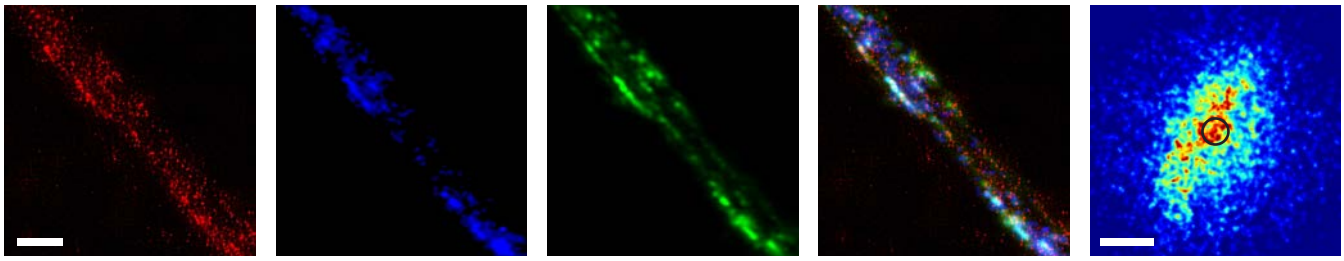
Vtia1a

Category	% of total protein	Molecules/Synapse	Molarity [µM]
SNARE	0.0022	50.55 ± 2.51	0.34

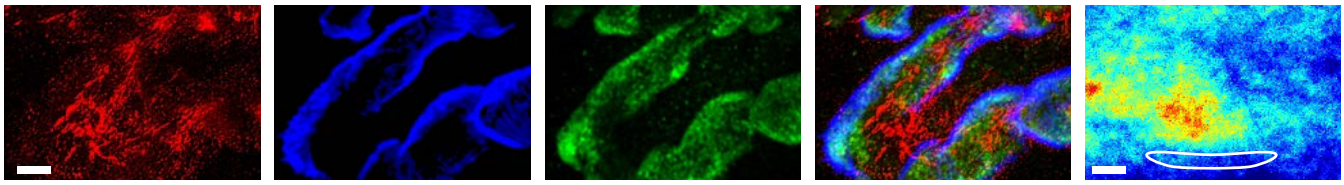
Synaptosomes (cortex and cerebellum, *Rattus norvegicus*)

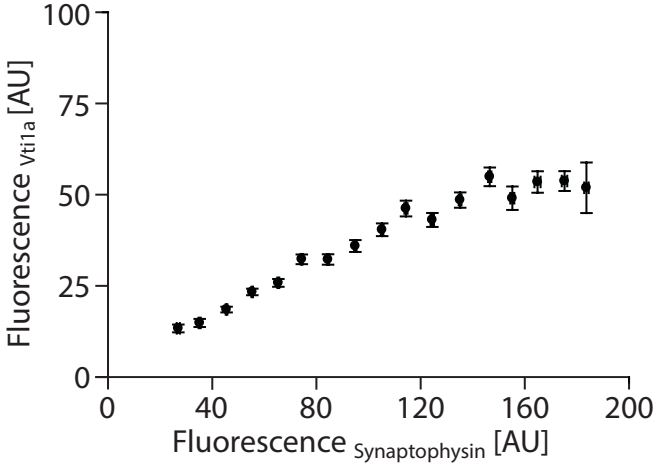


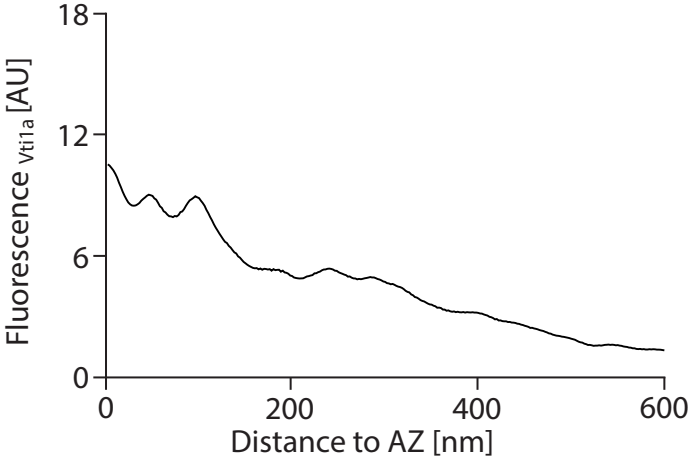
Primary hippocampal cultures (CA1-CA3, *Rattus norvegicus*)



Neuromuscular junction (*levator auris longus*, *Mus musculus*)







Antibodies used (for Vti1a):

Immunoblots - Synaptic Systems (Göttingen, Germany), 165 002
Synaptosome stainings - BD Biosciences (Heidelberg, Germany), 611220
HC stainings - BD Biosciences (Heidelberg, Germany), 611220
NMJ stainings - BD Biosciences (Heidelberg, Germany), 611220

References:

PDB-Identifier (structural information): 1vcs.
Mallard, F., et al. (2002). J Cell Biol 156, 653-64.
Kreykenbohm, V., et al. (2002). Eur J Cell Biol 81, 273-80.
Takamori, S., et al. (2006). Cell 127, 831-846.

Vtia1a

Category	% of total protein	Molecules/Synapse	Molarity [μM]
SNARE	0.0022	50.55 ± 2.51	0.34