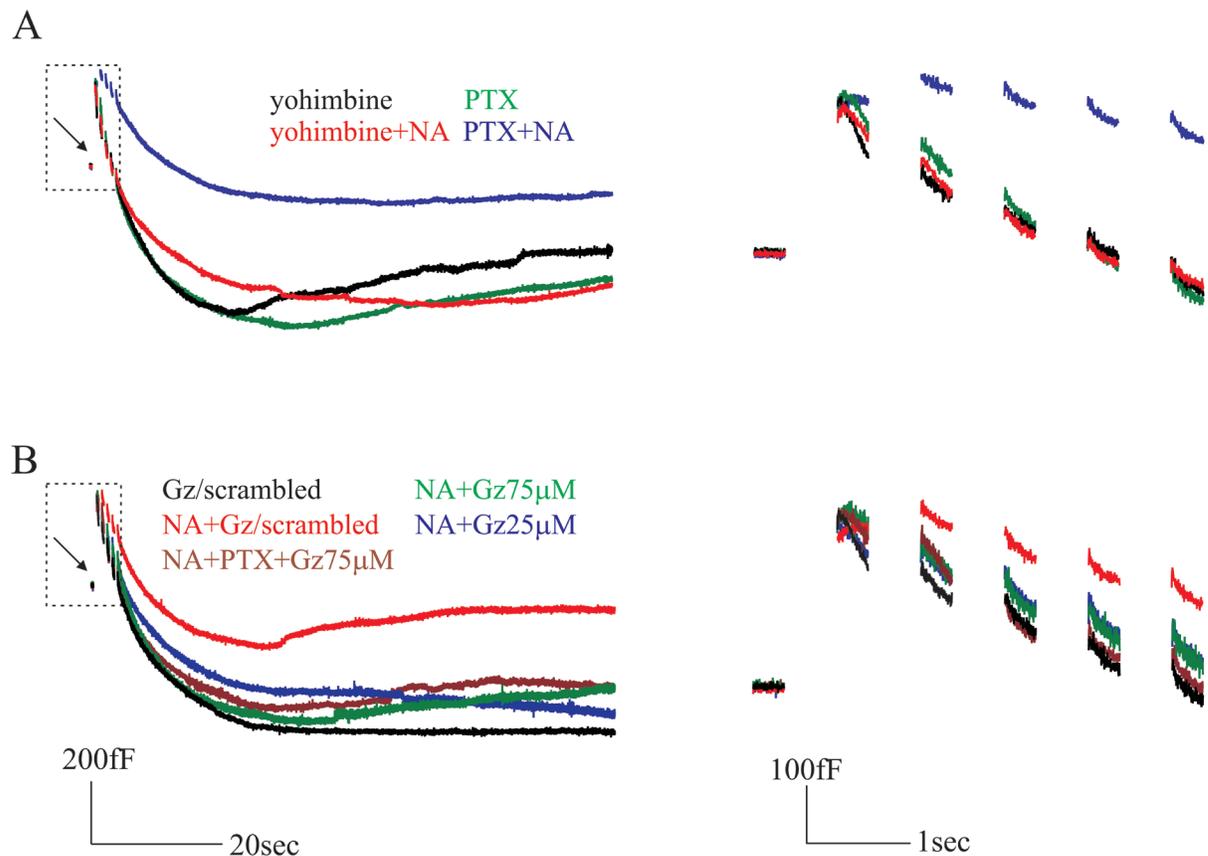


Supplemental Fig. 1. *The gaussian distributions of endocytotic vesicle sizes under the experimental conditions detailed in Fig. 2. The data are derived from 16 – 21 cells and are expressed as the square roots of Cv values and the corresponding vesicle diameters.*



Supplemental Fig. 2. *Involvement of the α_2 -adrenergic receptor and G_z in the hormonal inhibition of endocytosis.* The entire recording traces (left) and the expanded pulse-stimulated parts (right) are presented. A, inhibition of endocytosis by NA in the absence and presence of yohimbine, and in the absence and presence of PTX-pretreatment. B, the action of NA on endocytosis was monitored in control cells and cells pretreated with PTX with the G_z blocking peptide ($G_{z-25\mu M}$, $G_{z-75\mu M}$) or the scrambled peptide ($G_{z/scrambled-75\mu M}$) dialyzed into the cells. The G_z blocking peptide prevented the effect of NA on endocytosis. The different experimental conditions in A and B are indicated. The arrows in the dashed squares indicate the cell capacitances before stimulation. The traces were averaged from 19-25 cells.

Supplemental table 1

	rate of early- endo (fF/pF/s)	rate of late-endo (fF/pF/s)	τ of late endo (s)
PTX (20)	-22.5 \pm 1.8	-13.4 \pm 1.3	4.5 \pm 0.4
NA+PTX (20)	-10.1 \pm 1.1 **	-7.4 \pm 0.6 *	5.7 \pm 0.6
yohimbine (21)	-21.4 \pm 1.6	-13.7 \pm 1.2	4.3 \pm 0.5
NA+yohimbine (20)	-23.5 \pm 2.5	-11.8 \pm 1.2	4.6 \pm 0.4
G _z /scrambled (23)	-28.9 \pm 2.6	-11.9 \pm 1.5	5.0 \pm 0.4
NA+G _z /scrambled (25)	-11.4 \pm 1.1 *	-8.3 \pm 0.8 *	4.9 \pm 0.5
NA+G _{z-25} μ M (19)	-21.5 \pm 1.9	-16.6 \pm 1.4	3.7 \pm 0.3
NA+G _{z-75} μ M (20)	-23.9 \pm 2.6	-10.9 \pm 1.0	5.5 \pm 0.5
NA+PTX+G _{z-75} μ M (22)	-27.5 \pm 2.9	-13.7 \pm 0.9	3.8 \pm 0.3

Supplemental table 1, the rates of early and late endocytosis and the time constants (τ) determined under the experimental conditions indicated. All values are normalized to cell size and given as mean \pm s.e.m. The numbers in brackets indicate the sample sizes. ** P<0.01, * P<0.05, # N.S.

Supplemental table 2

	control	NA			
	+G _z /scrambled	+G _z /scrambled	+G _z -25μM	+G _z -75μM	+G _z -75μM
	(23)	(25)	(19)	(20)	+PTX (22)
ΔCm _{/early-endo}	-27.4 ± 3.6	-15.2 ± 1.7 ^{**}	-25.1 ± 2.5 [#]	-27.8 ± 3.4 [#]	-28.8 ± 3.9 [#]
ΔCm _{/late-endo}	-59.3 ± 7.7	-40.9 ± 4.1 [*]	-61.4 ± 5.2 [#]	-59.9 ± 5.7 [#]	-52.0 ± 3.6 [#]

Supplemental table 2, a synthesized G_z peptide blocks the inhibitory effects of NA on endocytosis. All values are given as mean±s.e.m. The values are normalized to the cell size and the units are fF/pF. The numbers in brackets indicate the sample sizes. ^{**} P<0.01, ^{*} P<0.05, [#] N.S.