

Supplementary Data 6:

Since we compared more than two values in the time based SILAC experiments, an adequate adaption of the corresponding *p* values was necessary. Without such adaption the likelihood of generation of “false-positive significance” rises.

Therefore, we applied “Tukey’s T-Method” (Tukey, J.W. (1994), The Problem of Multiple Comparisons, 1-300 In: Braun, H.I.: *The Collected Works of John W. Tukey*, Volume VIII, New York: Chapman & Hall) which is a multiple T-test tool available within the program “R” version 2.8.0 that is freely available on the net.

We compared 20 min with 0 min, 2 min with min, and 2 min with 20 min.

pSerine 65:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)
twenty min - 0 min == 0	0.2600	0.2873	0.905	0.6572
two min - 0 min == 0	1.2200	0.2873	4.247	0.0124 *
two min - twenty min == 0	0.9600	0.2873	3.342	0.0360 *

pSerine 130:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)
twenty min - 0 min == 0	3.73667	0.45996	8.124	<0.001 ***
two min - 0 min == 0	3.82000	0.45996	8.305	<0.001 ***
two min - twenty min == 0	0.08333	0.45996	0.181	0.982

pSerine 173:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)
twenty min - 0 min == 0	-0.18200	0.04367	-4.168	0.00325 **
two min - 0 min == 0	-0.32400	0.04367	-7.420	< 0.001 ***
two min - twenty min == 0	-0.14200	0.04367	-3.252	0.01779 *

pSerine 170, pSerine 173:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)
twenty min - 0 min == 0	1.4367	0.1017	14.130	<0.001 ***
two min - 0 min == 0	0.8583	0.1017	8.442	<0.001 ***
two min - twenty min == 0	-0.5783	0.1017	-5.688	<0.001 ***

pSerine 259:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)
twenty min - 0 min == 0	1.1320	0.1292	8.760	<1e-04 ***
two min - 0 min == 0	0.1480	0.1292	1.145	0.506
two min - twenty min == 0	-0.9840	0.1292	-7.615	<1e-04 ***

pSerine 290:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)
twenty min - 0 min == 0	-0.52800	0.04629	-11.407	<1e-04 ***
two min - 0 min == 0	-0.54000	0.04629	-11.666	<1e-04 ***
two min - twenty min == 0	-0.01200	0.04629	-0.259	0.964

pSerine 339:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)	
twenty min - o min == 0	-0.4175	0.1084	-3.853	0.00969	**
two min - o min == 0	0.0225	0.1084	0.208	0.97656	
two min - twenty min == 0	0.4400	0.1084	4.061	0.00703	**

pSerine 381:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)	
twenty min - o min == 0	2.1233	0.3283	6.468	0.0016	**
two min - o min == 0	2.2400	0.3283	6.823	<0.001	***
two min - twenty min == 0	0.1167	0.3283	0.355	0.9335	

pSerine 397 or pSerine 398:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)	
twenty min - o min == 0	8.240	1.665	4.949	0.00618	**
two min - o min == 0	3.743	1.665	2.248	0.014117*	
two min - twenty min == 0	-4.497	1.665	-2.701	0.07912	.

pSerine 419:

Linear Hypotheses:

	Estimate	Std. Error	t value	Pr(> t)	
twenty min - o min == 0	0.45250	0.04997	9.055	<1e-04	***
two min - o min == 0	0.03750	0.04997	0.750	0.741	
two min - twenty min == 0	-0.41500	0.04997	-8.305	<1e-04	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
(Adjusted p values reported -- single-step method)