

Studied gene	a TM	b Ami+TM	c Esci+TM	d R-ket+TM	e S-ket+TM	f $\Delta$ b-a	g $\Delta$ c-a	h $\Delta$ d-a	I $\Delta$ e-a
ATF4	2.87 $\pm$ 0.28	3.19 $\pm$ 0.43	3.03 $\pm$ 0.35	3.28 $\pm$ 0.45	3.35 $\pm$ 0.32				
ATF6	2.50 $\pm$ 0.31	2.63 $\pm$ 0.30	2.52 $\pm$ 0.39	2.58 $\pm$ 0.30	2.30 $\pm$ 0.22				
CREB3	2.34 $\pm$ 0.23	1.59 $\pm$ 0.13	2.24 $\pm$ 0.29	2.23 $\pm$ 0.19	4.01 $\pm$ 1.27				↑
CREB3L1	1.49 $\pm$ 0.13	1.47 $\pm$ 0.25	1.44 $\pm$ 0.31	2.99 $\pm$ 0.67	2.50 $\pm$ 0.45			↑ *	↑
CREB3L4	3.91 $\pm$ 0.99	3.64 $\pm$ 1.66	5.50 $\pm$ 2.89	3.09 $\pm$ 1.57	6.07 $\pm$ 1.32		↑		↑
DDIT3	13.75 $\pm$ 1.08	16.58 $\pm$ 2.09	14.2 $\pm$ 1.25	18.31 $\pm$ 1.88	19.59 $\pm$ 1.09	↑↑		↑↑ *	↑↑↑ **
EDEM1	3.85 $\pm$ 0.35	4.08 $\pm$ 0.63	3.61 $\pm$ 0.63	5.08 $\pm$ 0.50	5.55 $\pm$ 0.56			↑	↑
EIF2AK3	1.78 $\pm$ 0.17	2.04 $\pm$ 0.35	1.67 $\pm$ 0.34	1.95 $\pm$ 0.23	2.56 $\pm$ 0.67				
EIF2S1	0.99 $\pm$ 0.14	0.90 $\pm$ 0.16	0.74 $\pm$ 0.21	0.72 $\pm$ 0.13	0.70 $\pm$ 0.13				
ERN1	3.61 $\pm$ 0.37	3.36 $\pm$ 0.71	3.99 $\pm$ 1.03	6.37 $\pm$ 1.59	8.26 $\pm$ 2.10			↑↑	↑↑↑ *
GABPA	1.14 $\pm$ 0.10	1.36 $\pm$ 0.07	1.00 $\pm$ 0.18	1.15 $\pm$ 0.18	1.28 $\pm$ 0.30				
HSPA5	19.36 $\pm$ 1.26	20.06 $\pm$ 3.62	19.09 $\pm$ 3.00	17.54 $\pm$ 2.25	20.07 $\pm$ 2.54			↓	
MAP3K4	1.35 $\pm$ 0.14	1.60 $\pm$ 0.27	1.29 $\pm$ 0.24	1.62 $\pm$ 0.44	1.56 $\pm$ 0.30				

**Table S1.** Effect of tunicamycin (TM) with antidepressants (Ami- amitriptyline, Esci – escitalopram, R-ket - R-ketamine, and S-ket - S-ketamine) and tunicamycin alone in astrocytes with regard to the expression of genes associated with ER stress. To illustrate the difference ( $\Delta$ ) in gene expression of antidepressants the symbols were introduced: ↑ for 1-2.5 fold change; ↑↑ 2.6-4.5 fold change; ↑↑↑ > 4.6 fold change. Data are presented as mean  $\pm$  SEM and expressed as fold change vs untreated control cells. Statistical significance vs tunicamycin-treated cells is indicated when appropriate; \*\*  $p < 0.01$ ; \*  $p < 0.05$ .