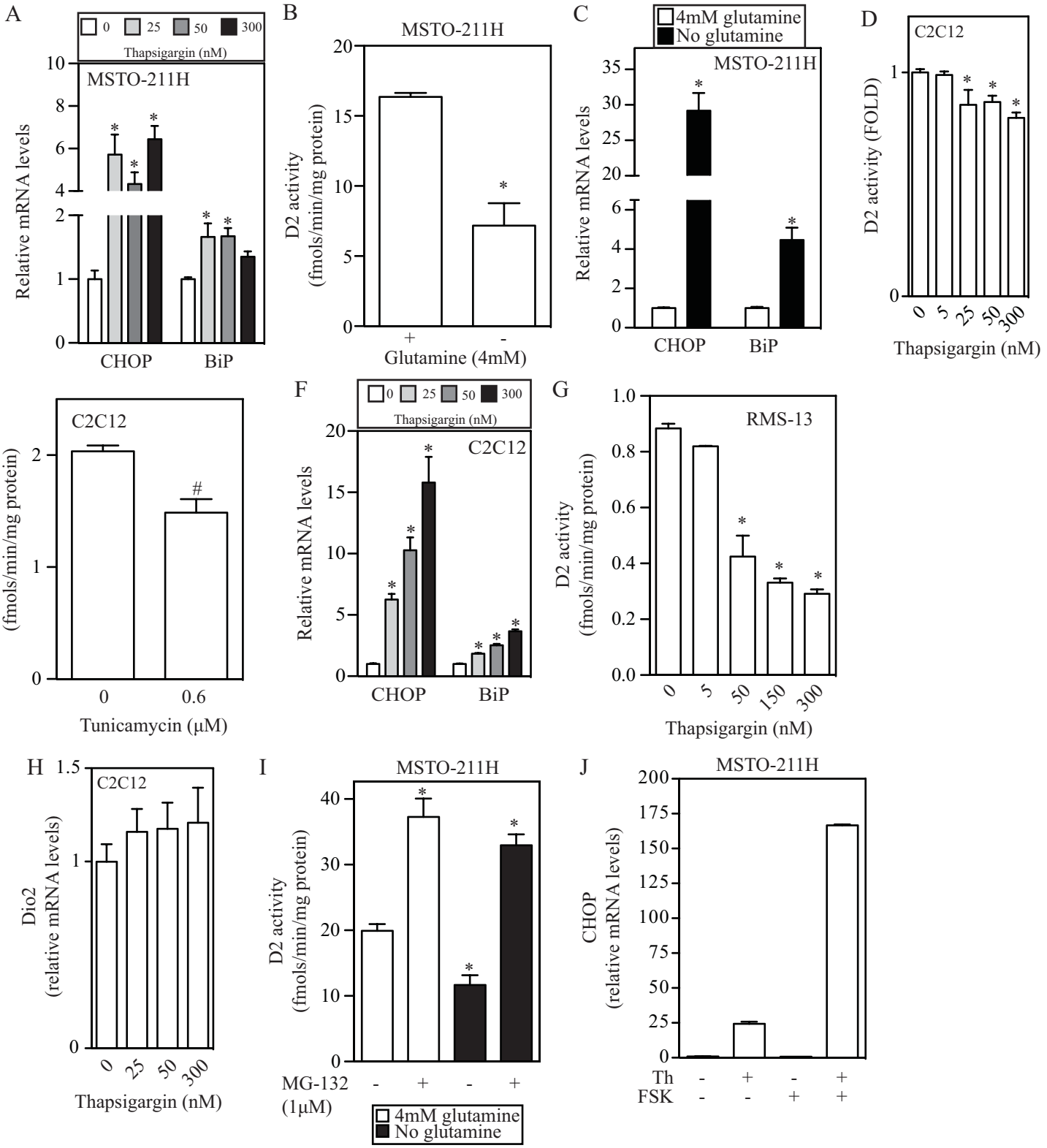

Fig S1. **(A)** BiP and CHOP mRNA levels in MSTO-211H cells treated with different doses of thapsigargin. **(B)** D2 activity and **(C)** BiP and CHOP mRNA levels in MSTO-211H cells after glutamine starvation for 24 h. **(D)** D2 activity in C2C12 myotubes treated with increasing doses of thapsigargin or **(E)** with 0.6 μM tunicamycin. **(F)** BiP and CHOP mRNA levels in C2C12 myotubes treated with different doses of thapsigargin. **(G)** D2 activity in RMS-13 cells treated with increasing doses of thapsigargin. (H) Dio2 mRNA levels in C2C12 myotubes treated with increasing doses of thapsigargin. **(I)** D2 activity in MSTO-211H cells pre treated with 1 μM MG-132 for 24 h, followed by glutamine starvation for 24 h. **(J)** CHOP mRNA levels in MSTO-211H cells pre-treated with thapsigargin (Th) for 1h and treated with forskolin (FSK) for 6 h. All values are displayed as ± SEM and are representative of at least 2 experiments, where *p<0.01 vs. non treated group by One-way ANOVA followed by Dunnett's multiple comparison test. When only 2 groups are compared, #p<0.05, *p<0.01 vs. non treated group by two-tailed Student t-test.

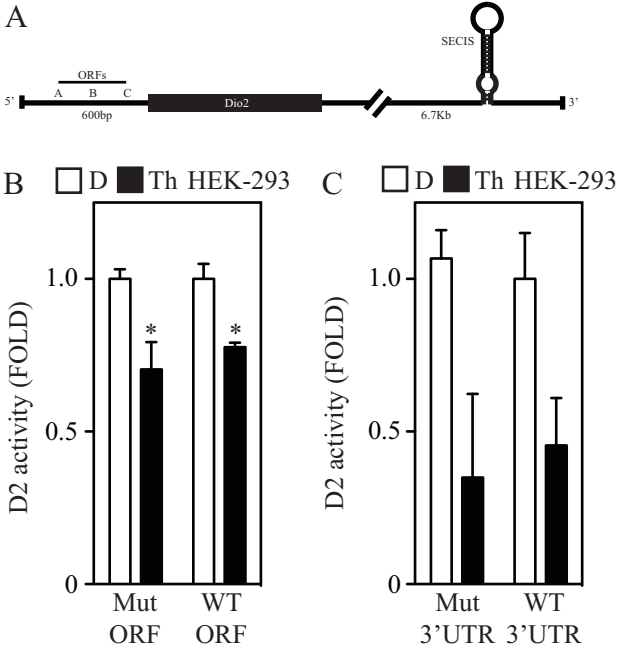

Fig S2. (A) Schematic representation of Dio2 mRNA structure with its 5'UTR regulatory ORFs and 3'UTR SECIS sequence. In (B) D2 activity in HEK-293 cells transiently expressing a D2 encoding vector with Dio2's wild type (WT-ORF) or mutant (Mut-ORF) 5'UTR treated with vehicle (clear bars) or 300 nM thapsigargin (dark bars), and in (C) D2 activity in HEK-293 cells transiently expressing a D2 encoding vector with Dio2's wild type (WT-3'UTR) or mutant (Mut-3'UTR) 3'UTR treated with vehicle (clear bars) or 300 nM thapsigargin (dark bars).