



**Figure S1** LA treatment days before glutamate induced oxidative stress did not result in improved HT22 protection compared to a 24h pre-incubation. 5000 cells were seeded into 96-well plates and pre-incubated 9 days (a), 6 days (b) or 2 days (c) before glutamate addition either with vehicle or 25  $\mu$ M LA DHLA, (R)-LA or (S)-LA. Graphs represent curve fits  $\pm$ SEM of four independent experiments, each performed in triplicates. Significant differences between vehicle- and substance-treatment are indicated by asterisks (\*\*\*) $p < 0.001$ , area under the curve compared by ANOVA with Dunnett's post hoc test)