

**Additional file 7: Statistical analyses of A $\beta$  data presented in Figure 1 and additional file 2.**

ns = not significant, TG = Tga20.

Test	Comparison	A $\beta$ 1-40	A $\beta$ 1-42	A $\beta$ 4-42	A $\beta$ 3[pE]-42
Neurosphere volume - Fig 1B 2-way ANOVA, F = 53.75, p < 0.001, n = 4	KO A $\beta$ vs buffer	P < 0.05	P < 0.05	ns	P < 0.001
	WT A $\beta$ vs buffer	P < 0.01	P < 0.05	P < 0.05	ns
	KO vs WT	P < 0.001	P < 0.001	P < 0.01	P < 0.001
	TG A $\beta$ vs Buffer	ns	ns	ns	P < 0.05
	KO vs TG	P < 0.001	P < 0.001	P < 0.05	P < 0.001
	WT vs TG	Ns	ns	ns	ns
Neurosphere diameter - Fig 1C 2-way ANOVA, F = 63.43, p < 0.001, n = 4	KO A $\beta$ vs buffer	ns	P < 0.05	ns	P < 0.01
	WT A $\beta$ vs buffer	P < 0.01	P < 0.001	P < 0.01	P < 0.05
	KO vs WT	P < 0.001	P < 0.001	P < 0.01	P < 0.001
	TG A $\beta$ vs Buffer	P < 0.001	P < 0.001	P < 0.001	P < 0.001
	KO vs TG	P < 0.001	P < 0.001	P < 0.001	P < 0.001
	WT vs TG	Ns	ns	ns	ns
Neurosphere colonies - Fig 1D 2-way ANOVA, F = 9.647, p < 0.001, n = 4	KO A $\beta$ vs buffer	ns	ns	ns	P < 0.05
	WT A $\beta$ vs buffer	ns	P < 0.05	ns	ns
	KO vs WT	ns	ns	ns	ns
	TG A $\beta$ vs Buffer	P < 0.05	P < 0.001	P < 0.001	P < 0.05
	KO vs TG	ns	ns	P < 0.001	P < 0.05
	WT vs TG	ns	ns	P < 0.01	ns
Cell cycle G0/G1 phase - Fig 1F 2-way ANOVA, F = 22.99, p = 0.003, n = 4	KO A $\beta$ vs buffer	--	P < 0.05	--	--
	WT A $\beta$ vs buffer	--	ns	--	--
	KO vs WT	--	P < 0.05	--	--
Cell cycle S phase - Fig 1F 2-way ANOVA, F = 39.18, p = 0.0033, n = 4	KO A $\beta$ vs buffer	--	ns	--	--
	WT A $\beta$ vs buffer	--	ns	--	--
	KO vs WT	--	P < 0.01	--	--

Cell cycle G2/M phase - Fig 1F 2-way ANOVA, F = 24.91, p = 0.0025, n = 4	KO A $\beta$ vs buffer	--	P < 0.05	--	--
	WT A $\beta$ vs buffer	--	ns	--	--
	KO vs WT	--	P < 0.01	--	--
<b>Test</b>	<b>Comparison</b>		<b>Result</b>		
Neurosphere volume 2-way ANOVA, F = 7.48, p = 0.006, n = 4	KO vs WT (untreated)		P < 0.05		
	KO vs TG (untreated)		P < 0.05		
	WT vs TG (untreated)		ns		
	KO untreated vs buffer		ns		
	WT untreated vs buffer		ns		
	TG untreated vs buffer		ns		
Neurosphere diameter 2-way ANOVA, F = 10.01, p = 0.003, n = 4	KO vs WT (untreated)		P < 0.05		
	KO vs TG (untreated)		ns		
	WT vs TG (untreated)		ns		
	KO untreated vs buffer		ns		
	WT untreated vs buffer		ns		
	TG untreated vs buffer		ns		
Neurosphere colonies 2-way ANOVA, F = 22.13, p < 0.001, n = 4	KO vs WT (untreated)		P < 0.01		
	KO vs TG (untreated)		ns		
	WT vs TG (untreated)		P < 0.001		
	KO untreated vs buffer		ns		
	WT untreated vs buffer		ns		
	TG untreated vs buffer		ns		