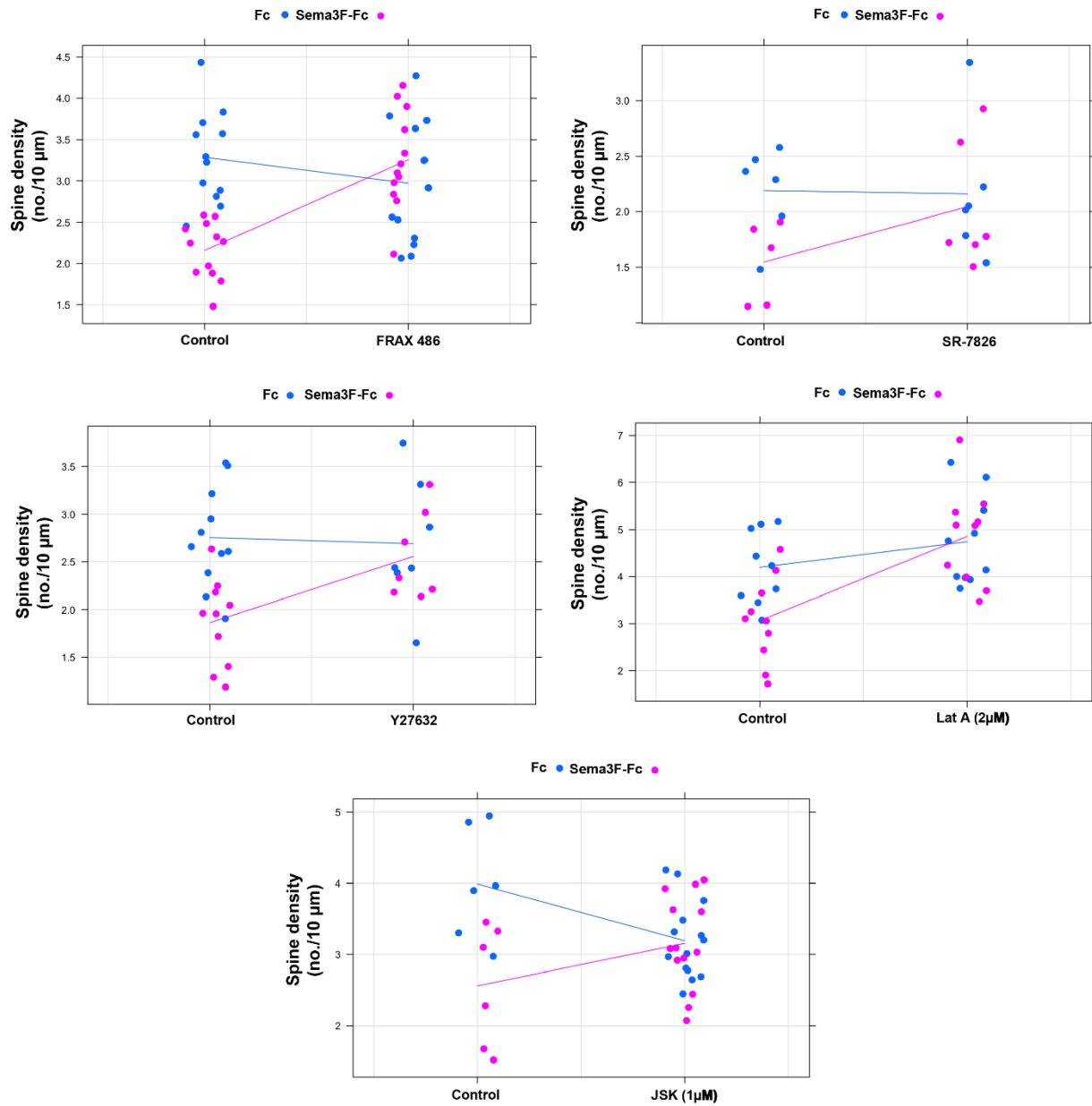
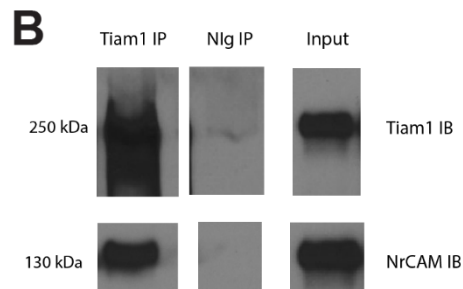
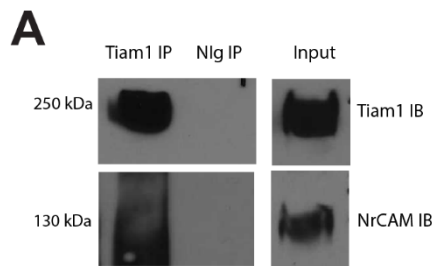


Supplementary Figure 1: Scatter plots for effect of inhibitors on spine density



Supplementary Figure 2: Tiam1 Co-IP Replicates



Supplementary Table 1 Multinomial logistic regression fits for spine morphology

Percent of Spines (% \pm S. E. M.)

Treatment	Control			Treated		
	Mushroom	Stubby	Thin	Mushroom	Stubby	Thin
SR7862	41.59 \pm 0.07	28.75 \pm 0.05	29.66 \pm 0.04	47.51 \pm 0.09	29.85 \pm 0.10	22.65 \pm 0.08
Y27632	46.05 \pm 0.09	26.26 \pm 0.04	27.69 \pm 0.05	47.94 \pm 0.02	32.79 \pm 0.06	19.27 \pm 0.04
FRAX 486	39.71 \pm 0.06	33.07 \pm 0.06	27.22 \pm 0.06	39.86 \pm 0.11	31.89 \pm 0.12	28.25 \pm 0.07
Jasplakinolide	47.96 \pm 0.10	27.23 \pm 0.11	24.80 \pm 0.07	48.3 \pm 0.09	28.02 \pm 0.08	23.69 \pm 0.06
Latrunculin (2 μ M)	44.58 \pm 0.06	28.34 \pm 0.07	27.09 \pm 0.06	46.99 \pm 0.06	26.27 \pm 0.04	26.74 \pm 0.06

P-values for effect of treatment on spine morphology (compared to % mushroom spines)

	Stubby	Thin
SR7862	0.98	0.31
Y27632	0.72	0.28
FRAX	0.9	0.76
Jasplakinolide	0.84	0.69
Latrunculin	0.41	0.73