

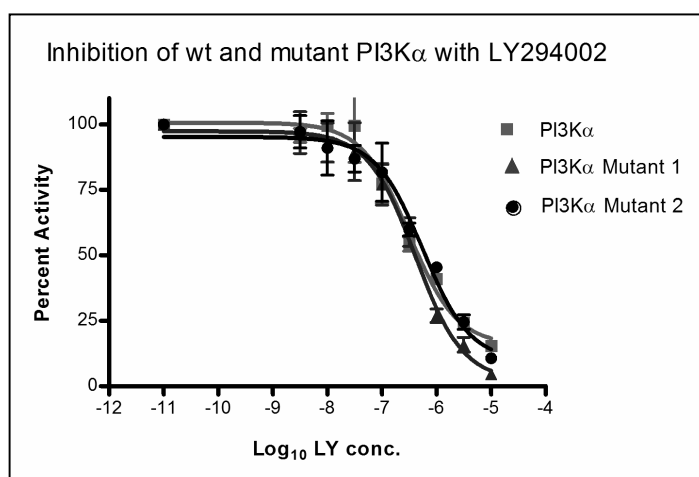
**Supplementary Figure 1: Inhibition of PI3K (WT and mutant) with LY294002**

Inhibition of purified PI3K enzyme activity by varying concentrations of LY294002

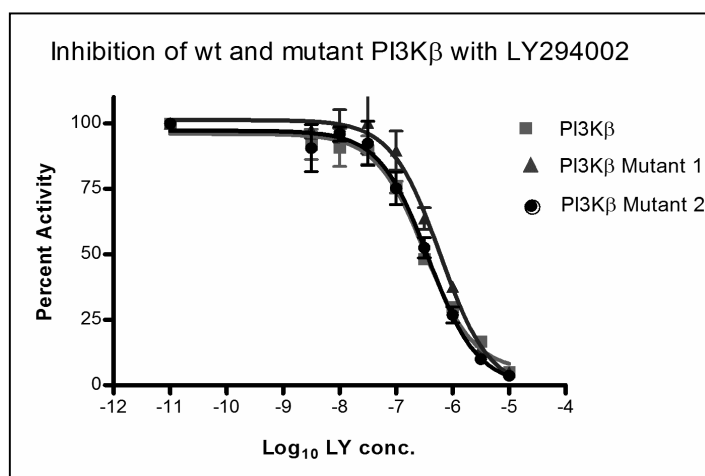
A: Graph shows decrease in activity of PI3K $\alpha$  WT (■) and PI3K $\alpha$  mutants H855E (▲) and Q859D (●) upon the addition of increasing concentrations of LY294002

B: Graph shows decrease in activity of PI3K $\beta$  WT (■) and PI3K $\beta$  mutants E858H (▲) and D862Q (●) upon the addition of increasing concentrations of LY294002

A.



B.



**Supplementary Table 1: Full IC50 data including error calculations (SD and SEM) for inhibition of WT and mutant PI3K isoforms.**

	PI3Kb (wt)			PI3Kb (D862Q)			PI3Kb (E858H)			PI3Ka (wt)			PI3Ka (Q861D)			PI3Ka (H857E)		
	IC50	SD	SEM	IC50	SD	SEM	IC50	SD	SEM	IC50	SD	SEM	IC50	SD	SEM	IC50	SD	SEM
LY294002	0.339	0.020	0.012	0.623	0.136	0.079	0.361	0.057	0.033	0.465	0.158	0.091	0.405	0.134	0.077	0.628	0.188	0.108
TGX221	0.029	0.018	0.011	0.032	0.012	0.007	0.009	0.002	0.001	0.771	0.044	0.026	0.861	0.158	0.091	1.388	0.379	0.219
TGX286	0.007	0.004	0.002	0.017	0.008	0.005	0.013	0.002	0.001	0.995	0.169	0.098	2.171	0.915	0.528	1.335	0.161	0.093
TGX102	0.178	0.039	0.022	0.198	0.034	0.020	0.134	0.031	0.018	0.767	0.228	0.132	2.511	0.381	0.220	2.327	0.081	0.047
TGX132	2.505	0.491	0.284	1.127	0.316	0.183	1.159	0.087	0.050	0.841	0.246	0.142	5.171	1.826	1.054	4.123	2.386	1.378
I	0.532	0.127	0.073	0.438	0.172	0.099	0.321	0.079	0.046	0.132	0.017	0.010	0.387	0.028	0.016	0.656	0.276	0.159
III	0.830	0.253	0.146	0.681	0.095	0.055	0.206	0.070	0.040	0.223	0.023	0.013	0.664	0.292	0.169	0.640	0.167	0.097
III	4.311	2.063	1.191	0.336	0.073	0.042	0.381	0.031	0.018	0.155	0.027	0.016	0.269	0.122	0.071	0.477	0.049	0.028