

**Table S2. Comparison of pKa and phosphoinositide turnover activity for straight chain fatty acids in *Dictyostelium***

<b>Acid</b>	<b>Carbon atoms</b>	<b>pKa</b>	<b>PIP level % control</b>	<b>SD</b>
VPA	8	4.6	32.0	8.7
Pentanoic acid	5	4.84	66.9	7.8
Hexanoic acid	6	4.85	49.2	10.1
Heptanoic acid	7	4.89	31.2	5
Octanoic acid	8	4.89	16.7	3.4
Nonanoic acid	9	4.95	8	1.7
Decanoic acid	10	4.90	12.9	1.4
dodecanoic acid:	11	4.85	42	3
heptadecanoic acid	17	4.78	92.3	2.8

Data are provided for residual PIP production ( $\pm$  s.d.) in the presence of 0.5 mM treatment over a 9 minute period. Each value represents triplicate experiments in duplicate.