MAMMALIAN/YEAST	PHOSPHOINOSITIDE		STRUCTURE
Kinase	**Synthesized**		
	in vitro	*intact cells*	
mPIKfyve$_L$	PtdIns(3,5)P_2 PtdIns5P	PtdIns(3,5)P_2 PtdIns5P	
Fab1	PtdIns(3,5)P_2 PtdIns5P	PtdIns(3,5)P_2	
Phosphatase	**Turned over**		
	in vitro	*intact cells*	
hSac3	PtdIns(3,5)P_2 PtdIns(4,5)P_2 PtdIns(3,4,5)P_3	PtdIns(3,5)P_2	
Fig4	PtdIns(3,5)P_2	PtdIns(3,5)P_2	
Regulator	**Affected**		
	in vitro	*intact cells*	
hArPIKfyve	PtdIns(3,5)P_2 PtdIns5P	PtdIns(3,5)P_2 PtdIns5P	
Vac14		PtdIns(3,5)P_2	

The DEP domain region (349-487) is also homologous to "winged helix" DNA-binding domain. CHK-Hom indicates homologous region enriched in Cys, His andLys. Parts of CHK-Hom show homology to spectrin repeats (not shown). H in ArPIKfyve are heat repeats. Presented are the products of PIKfyve or Fab1, the substrates of Sac3, and the affected PI by ArPIKfyve or Vac14, confirmed both *in vitro* and *in vivo*.