

Supplemental Table 1: Prediction of human Polycomb Sumoylation Sites

Complex	Drosophila	Name	Accession Number	Total nr AA	Position	Peptide	Type				
PRC2	E(z)	EZH1	Q92800	747	20	RKVKSEY	Ψ-K-X-E				
					140	DEVKEED	Ψ-K-X-E				
					327	KEIKIEP	Ψ-K-X-E				
	Esc	EZH2	Q15910	746	20	KRVKSEY	Ψ-K-X-E				
					19	PAAKKQK	Non-consensus				
					Su(z)12	SUZ12	Q15022	739	75 [#]	KKPKMEH	Ψ-K-X-E
145	EKMKGEQ	Ψ-K-X-E									
				735	KQSKKQK	Non-consensus					
PRC1	Pc	CBX2	Q14781	532	153	LVAKPEL	Ψ-K-X-E				
					410	DTSKSEK	Non-consensus				
					492 [#]	LQVKPET	Ψ-K-X-E				
						CBX4	O00257	558	-	-	-
						CBX6	O95503	412	-	-	-
						CBX7	O95931	251	-	-	-
	Ph	PHC1	P78364	1004	799	NLLKCEY	Ψ-K-X-E				
					976	LLLKEEH	Ψ-K-X-E				
					641	LKLKCEL	Ψ-K-X-E				
					784	ELLKCEF	Ψ-K-X-E				
					981	NSLKES*	Non-consensus				
						SCe/dRing	RING1	Q06587	406	-	-
			RNF2	Q99496	336	336	KEHK***	Non-consensus			
	Psc	BMI1	P35226	326	88	GLFKNEM	Ψ-K-X-E				
					88	GLFKDEM	Ψ-K-X-E				
	PhoRC	Pho	YY1	P25490	414	-	-				
	Other	Psc	PCGF1	Q9BSM1	247	-	-	-			
						PCGF6	Q9BYE7	350	16	GAAKTEG	Ψ-K-X-E
Scm		SCMH1	Q96GD3	660	63	ISMKLEA	Ψ-K-X-E				
					172	MGMKLEA	Ψ-K-X-E				
						SCML1	Q9UN30	208	-	-	
						SCML2	Q9UQR0	700	13	MDVKKEN	Ψ-K-X-E
									68	VGMKLEA	Ψ-K-X-E
									161	TLFKKEP	Ψ-K-X-E
									177	VGMKLEA	Ψ-K-X-E
									252	NIAKTES	Ψ-K-X-E
									487	QSAKEDV	Non-consensus
									536	AIPKEEN	Ψ-K-X-E
	RYBP	Q8N488	228	77	PPPKKEK	Ψ-K-X-E					
				80	KKEKKEK	Non-consensus					
				83	KKEKVEK	Non-consensus					
				86	KVEKQDK	Non-consensus					

Predictions were made by using SUMOsp 2.0, a site-specific predictor of sumoylation sites [1].

[#]: experimentally verified sumoylation sites (see Table 2 in main text).

References

1. Ren J, Gao X, Jin C, Zhu M, Wang X, Shaw A, Wen L, Yao X, Xue Y: **Systematic study of protein sumoylation: Development of a site-specific predictor of SUMOsp 2.0.** *Proteomics* 2009.