

Table S1. Summary of p300 acetylated histones with and without activators by MALDI-TOF

Histone	Lysine	+ Tax/pCREB Measured (MH+)	- Tax/pCREB Measured (MH+)	Calculated mass	Peptide Sequence
H3	Fully acetylated				
	K9, K14	985.543	985.545	984.5352	⁹ K _{AC} STGGK _{AC} APR ¹⁷
	K18, K23	1070.64	1070.631	1069.6243	¹⁸ K _{AC} QLATK _{AC} AAR ²⁶
	K27, K36, K37	1559.856	1559.814	1558.8579	²⁷ K _{AC} SAPATGGVK _{AC} K _{AC} PHR ⁴⁰
	Partially acetylated				
	(1) acetyl	Absent	1028.606	1027.614	¹⁸ KQLATKAAR ²⁶
	(1) acetyl	Absent	1475.84	1474.837	²⁷ KSAPATGGVKKPHR ⁴⁰
	(2) acetyl	1517.852	1517.821	1516.8474	²⁷ KSAPATGGVKKPHR ⁴⁰
	Unmodified				
	K56	1250.718	1250.703	1249.703	⁵⁴ YQKSTELLIR ⁶³
	K64	788.494	788.484	787.4704	⁶⁴ KLPFQR ⁶⁹
	K79	1335.692	1335.676	1334.683	⁷³ EIAQDFKTDLR ⁸³
	K122	1384.811	1384.789	1383.7908	¹¹⁷ VTIMPKDIQLAR ¹²⁸
Not Determined					
K4	ND	ND	704.4	³ TKQ TAR ⁸	
K115	ND	ND	3598.8	⁸⁴ FQSSAVMALQEASEAYLVGLFEDTNLCGIHAKR ¹¹⁶	
H4	Fully acetylated				
	K5, K8, K12, K16	1438.77	1438.866	1437.805	⁴ GK _{AC} G GK _{AC} GLGK _{AC} GGAK _{AC} R ¹⁷
	Partially acetylated				
	(2) acetyl	1354.701	1354.82	1353.784	⁴ GKGGKGLGKGGAKR ¹⁷
	(3) acetyl	1396.743	1396.843	1395.795	⁴ GKGGKGLGKGGAKR ¹⁷
	Unmodified				
	K31	1325.702	1325.794	1324.746	²⁴ DNIQGITKPAIR ³⁵
	K59	1386.837	1386.904	1385.84	⁵⁶ GVLKVFLNVIR ⁶⁷
K79, K91	1594.861	1594.962	1594.8912	⁷⁹ KTVTAMDVVYALKR ⁹²	
Not Determined					
K20	ND	ND	808.5	¹⁸ HRKVLR ²³	

Identification of H3 and H4 confirmed by database search (Mascot ion score (identity threshold) 154(48) and 104 (48), respectively).