Supplemental File 2. Histone peptides used for MS quantification. Abbreviations: pr = propionyl, un = unmodified, me = methyl, ac = acetyl, ph=phosphate, ox = oxidation. For the simplified notation for methylated peptides, meX:Y represents X number of total methyl groups (i.e. $^{12}CH_3$ and $^{13}CD_3$) and Y number of $^{13}CD_3$-methyl groups, and MX:Y represents X number of methionine residues and Y number of $^{13}CD_3$-methionine residues.

Histone peptide sequence	Simplified notation	Expected *m/z* (charge state)	Observed *m/z*
H3 3-7 peptide			
$_{pr}$TK$_{pr}$QTAR	H3K4un	816.458 (+1)	816.458
		408.733 (+2)	408.733
$_{pr}$TK$_{pr,me1:0}$QTAR	H3K4me1:0	830.474 (+1)	830.473
		415.741 (+2)	415.741
$_{pr}$TK$_{pr,me1:1}$QTAR	H3K4me1:1	834.494 (+1)	834.495
		417.751 (+2)	417.751
H3 9-17 peptide			
$_{pr}$K$_{pr}$STGGK$_{pr}$APR	H3K9un	1069.601 (+1)	1069.601
		535.304 (+2)	535.305
$_{pr}$K$_{pr,me1:0}$STGGK$_{pr}$APR	H3K9me1:0	1083.616 (+1)	1083.615
		542.312 (+2)	542.312
$_{pr}$K$_{pr,me1:1}$STGGK$_{pr}$APR	H3K9me1:1	1087.637 (+1)	1087.638
		544.322 (+2)	544.323
$_{pr}$K$_{me2:0}$STGGK$_{pr}$APR	H3K9me2:0	521.307 (+2)	521.307
		347.874 (+3)	347.873
$_{pr}$K$_{me2:1}$STGGK$_{pr}$APR	H3K9me2:1	523.317 (+2)	523.317
		349.214 (+3)	349.214
$_{pr}$K$_{me2:2}$STGGK$_{pr}$APR	H3K9me2:2	525.327 (+2)	525.328
		350.554 (+3)	350.555
$_{pr}$K$_{me3:0}$STGGK$_{pr}$APR	H3K9me3:0	528.314 (+2)	528.314
$_{pr}$K$_{me3:1}$STGGK$_{pr}$APR	H3K9me3:1	530.325 (+2)	530.324
$_{pr}$K$_{me3:2}$STGGK$_{pr}$APR	H3K9me3:2	532.335 (+2)	532.336
$_{pr}$K$_{me3:3}$STGGK$_{pr}$APR	H3K9me3:3	534.345 (+2)	534.346
$_{pr}$K$_{me2:0}$S$_{ph}$TGGK$_{pr}$APR	H3K9me2:0S10ph	561.290 (+2)	561.290
		374.529 (+3)	374.529
H3 27-40 peptide			
$_{pr}$K$_{pr}$SAPATGGVK$_{pr}$K$_{pr}$PHR	H3K27unK36un	829.473 (+2)	829.473
		553.318 (+3)	553.318
$_{pr}$K$_{pr,me1:0}$SAPATGGVK$_{pr}$K$_{pr}$PHR	H3K27me1:0K36un	836.481 (+2)	836.482
		557.990 (+3)	557.991
$_{pr}$K$_{pr}$SAPATGGVK$_{pr,me1:0}$K$_{pr}$PHR	H3K27unK36me1:0	" " (+2)	836.480
		" " (+3)	557.989
$_{pr}$K$_{pr,me1:1}$SAPATGGVK$_{pr}$K$_{pr}$PHR	H3K27me1:1K36un	838.491 (+2)	838.492
		559.330 (+3)	559.331
$_{pr}$K$_{pr}$SAPATGGVK$_{pr,me1:1}$K$_{pr}$PHR	H3K27unK36me1:1	" " (+2)	838.491

		“ “ (+3)	559.330
$_{pr}K_{pr,me1:0}$SAPATGGVK$_{pr,me1:0}K_{pr}$PHR	H3K27me1:0K36me1:0	843.489 (+2)	843.489
		562.662 (+3)	562.662
$_{pr}K_{me2:0}$SAPATGGVK$_{pr}K_{pr}$PHR	H3K27me2:0K36un	815.476 (+2)	815.475
		543.987 (+3)	543.987
$_{pr}K_{pr}$SAPATGGVK$_{pr,me2:0}K_{pr}$PHR	H3K27unK36me2:0	“ “ (+2)	815.475
		“ “ (+3)	543.987
$_{pr}K_{me2:1}$SAPATGGVK$_{pr}K_{pr}$PHR	H3K27me2:1K36un	817.486 (+2)	817.485
		545.327 (+3)	545.326
$_{pr}K_{pr}$SAPATGGVK$_{pr,me2:1}K_{pr}$PHR	H3K27unK36me2:1	“ “ (+2)	817.486
		“ “ (+3)	545.327
$_{pr}K_{me2:2}$SAPATGGVK$_{pr}K_{pr}$PHR	H3K27me2:2K36un	819.496 (+2)	819.497
		546.667 (+3)	546.667
$_{pr}K_{pr}$SAPATGGVK$_{pr,me2:2}K_{pr}$PHR	H3K27unK36me2:2	“ “ (+2)	819.497
		“ “ (+3)	546.668
$_{pr}K_{me3:0}$SAPATGGVK$_{pr}K_{pr}$PHR	H3K27me3:0K36un	822.483 (+2)	822.482
		548.658 (+3)	548.658
$_{pr}K_{me3:1}$SAPATGGVK$_{pr}K_{pr}$PHR	H3K27me3:1K36un	824.494 (+2)	824.493
		549.998 (+3)	549.997
$_{pr}K_{me3:2}$SAPATGGVK$_{pr}K_{pr}$PHR	H3K27me3:2K36un	826.504 (+2)	826.503
		551.339 (+3)	551.338
$_{pr}K_{me3:3}$SAPATGGVK$_{pr}K_{pr}$PHR	H3K27me3:3K36un	828.514 (+2)	828.517
		552.679 (+3)	552.679
H3 117-128 peptide			
$_{pr}$VTIM$_{1:0}$PK$_{pr}$DIQLAR	H3M120 M1:0	748.929 (+2)	748.932
$_{pr}$VTIM$_{ox,1:0}$PK$_{pr}$DIQLAR	H3M120ox M1:0	756.927 (+2)	756.929
$_{pr}$VTIM$_{1:1}$PK$_{pr}$DIQLAR	H3M120 M1:1	750.940 (+2)	750.941
$_{pr}$VTIM$_{ox,1:1}$PK$_{pr}$DIQLAR	H3M120ox M1:1	758.937 (+2)	758.938
H4 20-23 peptide			
$_{pr}K_{pr}$VLR	H4K20un	627.419 (+1)	627.419
		314.214 (+2)	314.213
$_{pr}K_{pr,me1:0}$VLR	H4K20me1:0	641.435 (+1)	641.434
		321.221 (+2)	321.221
$_{pr}K_{pr,me1:1}$VLR	H4K20me1:1	645.456 (+1)	645.456
		323.232 (+2)	323.232
$_{pr}K_{me2:0}$VLR	H4K20me2:0	599.424 (+1)	599.424
		300.216 (+2)	300.216
$_{pr}K_{me2:1}$VLR	H4K20me2:1	603.445 (+1)	603.446
		302.226 (+2)	302.227
$_{pr}K_{me2:2}$VLR	H4K20me2:2	607.465 (+1)	607.468
		304.237 (+2)	304.237
$_{pr}K_{me3:0}$VLR	H4K20me3:0	613.439 (+1)	613.441
		307.224 (+2)	307.223
H4 79-92 peptide			
$_{pr}K_{pr}$TVTAM$_{1:0}$DVVYALK$_{pr}$R	H4M84 M1:0	881.993 (+2)	881.995

		588.331 (+3)	588.331
$_{pr}K_{pr}TVTAM_{ox,1:0}DVVYALK_{pr}R$	H4M84ox M1:0	889.990 (+2)	889.991
		593.663 (+3)	593.663
$_{pr}K_{pr}TVTAM_{1:1}DVVYALK_{pr}R$	H4M84 M1:1	884.003 (+2)	884.005
		589.671 (+3)	589.673
$_{pr}K_{pr}TVTAM_{ox,1:1}DVVYALK_{pr}R$	H4M84ox M1:1	892.000 (+2)	892.001
		595.003 (+3)	595.003