

**Table S1. Affinities of the Wild-Type Human RAG2 PHD Finger for Histone Tail Peptides Measured by Tryptophan Fluorescence, Related to Figure 1**

Histone Peptide (H3 residues 1-12)	RAG2 PHD $K_D \pm$ s.d.
H3 unmodified	499 $\mu$ M $\pm$ 55
H3K4me1	118 $\mu$ M $\pm$ 36
H3K4me2	60 $\mu$ M $\pm$ 20
H3K4me3	4.2 $\mu$ M $\pm$ 0.2
H3R2me2sK4me3	177 nM $\pm$ 47

s.d.-standard deviation

**Table S2. qPCR Primers Used in This Study, Related to Figure 2**

<u>Primer</u>	<u>Sequence</u>	<u>Primer</u>	<u>Sequence</u>
1F	CAA GAA CCT TTC CGG CTG TA	1R	TTG CCT GAG GAT TCG CTT AC
2F	CAC CGC ATT TAG GGT CTC AT	2R	TGT TGG AAC AGT GCA CAC AA
3F	CTT CCA AGG GGA AAA GGA AG	3R	CAG AAT GGC CGG GAT ATA GA
4F	CAG AAC GAT CGA CAA AAC GA	4R	CCA GAG AAA CCG AGG CTA AA
5F	GAT CTG GGG AAA GCG CTA GT	5R	ATT TAA ATC GGA GCC GGA AT
6F	AAT CCG CCT GAC CTA GGA AT	6R	CAG TTG GCG TCC AGT CAG TA
7F	GTC CCA ACA GCT TGG CAT AC	7R	GCC GAA ACA AGT TGA TGG AG
8F	CAG CGA GTG AGT GAT GGA GA	8R	AAC CGC CTG ACC ATG TAG AC
9F	CGC CCA AAA CCA CTC TAC AT	9R	AAG TCA GCC ACG GGA GAT TA
10F	GCT TCA GCG CAC CTT TCT AC	10R	ATT TTG GCA ATC GCT TTG AC
11F	CGG AAA AGT TGC TGA GAA GG	11R	GGC GAA CTA AGA ACG CAA AA
12F	TTT GTC GCC TTT TCT TCG AG	12R	AAC GAG TTC GGG AGA TCT GA
13F	TCA TCT TCC CAC ATG AAC GA	13R	GGG CGA TTT TAA TCA CTG GA
14F	CGC TTC TTT TAA GGC TGT GC	14R	CCG TGC TTA GCT ACC CTT TG
15F	GGA TTT ACG ATC CCC CAA AT	15R	TCC TTC CTG GGA CAG CTA GA
16F	TGC CGC TCC TAG AAG CTA TG	16R	GAC TCC AAA CAT GGG GCT TA
17F	TGT TCT CCA ACG CTT GTT TG	17R	ATT CCT GGC TGT GAC ACC TT
18F	TTA CCA CCA CCC CAC TTC TC	18R	TCC TCT TAG CCG AGT CCT GA
19F	CTG CTC CAG GGG TAA GTG AG	19R	AAC GGG CTC TTA TGG AGC TT
20F	TAA TTT GTC TCG CCC CAA AC	20R	ACT CTT GGA AGT GCC TGC AT
21F	ACT TCT CGC TCC TGC TTC AC	21R	TCT CTC TGC ATA CCC CCA GT
22F	GAA CAA CTC GGG ACC ATC AT	22R	GCT AGC TCC AGC CTT GAA TG
23F	CTC CGT GGG TGA CTG AAA AG	23R	GGA GAC AAG AGG CCT CAC AC
24F	TGG GAG TGT CTA GCC CAG TT	24R	TCT CGG GTT TTT GGC TAA TG
25F	ACC TTA CAA ACT GCC GCA TC	25R	AGG CTA GCC GGG AGT TAG AG

<u>Primer</u>	<u>Sequence</u>	<u>Primer</u>	<u>Sequence</u>
26F	ACC AAC GAG ACG GAT AGT GG	26R	AGG CTG GTA GGC AAG ATG AA
27F	GGC TCT GTG AGG CCT GTA CT	27R	ACA TTG GCG ATA AGC AGC TC
28F	AGT GTT CCT GGG ACA TTT GG	28R	GAG GTT CTG GGT GAT GAG GA
29F	CTT GGT TGC CAC CTC TTG AT	29R	AAT GAG CCA ATC CAA ACC AG
30F	CTG CTG TGG GAG ACG ATT CT	30R	GCT CCA GGT TTC TGC TCA AC
31F	AAA CCG GAC TCA ACC AAG TG	31R	GAG CCC CAG GAC TAA AAA GG
32F	ACC GGA AAC CAA AGA AAA CC	32R	TGC ACT TTC CTG CAT TTC TG
33F	TCC AAA AAG CTC TGC CAT CT	33R	TGG AAC AGC TGA GTC CTC CT
34F	GAC TGG GCT CAG ACA GGA AG	34R	ACT TCG GAC CTC CAC CTT CT
35F	AGT CGC CCC TAG GTG ACT TT	35R	CAT ACT ACC AAC GCC CGA GT
36F	AGT CTT GGG TCC ATG GAT TG	36R	CCC CGC TTG AAT GAT ACA CT
37F	GAA CCC TTC CCC ATT TTA GC	37R	GTT GGA GTG GTG TGC TGA GA
38F	TGG AAA CAC ACC AGT TGT CG	38R	AGG TCC GTT ATA CCC GCT TT
39F	GAT GAG GTC ACC TGG CAT TT	39R	AGA AAT GGG CAC CAG AAC AC
40F	TTC TTC TGC CCT GCC TCT AA	40R	CTG TTC ATT GCC TCC TGT GA
41F	TTG CCA ACT TTC CCC ATT AG	41R	CCA GGA GCC AAT CAG AGA AC
42F	TAA GCC CTT CGT GCT CAA CT	42R	CCG GAC AGA ACG GAA GTA AC
43F	AAG CGC ACT TTC AGA TTT CG	43R	CCA GCG TTC CTC TGC TAC TC
44F	CAC AAC TCC CAG CAA CCT TT	44R	CGA CAT GGT CCT GTC TTC CT
45F	GCT TCC CTC AAC ATG TTC CT	45R	GCC CTC CTC CGA TAA CTA CC
46F	TGG GGG AGA CCC TCA TCT AT	46R	GCG AGA TCT GCT TGC TCA CT
47F	GGA CCT GCA TGT AAG GGA AC	47R	CTG TGC TCA GGG CTT AAA GA
48F	GAG CCC TTA CAA GGG GAA AC	48R	CTC GCA GGA AAT AGG TCA GC
49F	CTG TGC TGT GAC AAT CCT TCA	49R	AAA GCA CGC CAT GAG CTT TA
50F	TTG TAG CCC AGC TTG GAG TC	50R	GGA ATT TGT GGG ACC TGA GA
51F	CCA TTT TGG GAA GAG CTT TG	51R	GCT ACG GTC AAG GAC GAC TC

<u>Primer</u>	<u>Sequence</u>	<u>Primer</u>	<u>Sequence</u>
52F	CAG GAG CAG GGA TGT GGT	52R	CCA GCT AAG GCA TGG AAG G
53F	AGA CGC GGC AGC TTT TAT AG	53R	GTT CAT GGG TGG GAT TAT GC
54F	AAG AAC GGC GAC CAA TTA CA	54R	AGC GGT CCT TTT AGG CTC TC
55F	CCG GCT TGG AAG TCT GTA TC	55R	GCA CGG CTT TAG CTT TGC T
56F	CAA TTG ATT GCA AGG GCT TT	56R	CTC CGC TCT CTC AGC CTC T
57F	GGA AAA AGG TCG GGG CTA T	57R	AAG GTG GGA GTC CGT TGT G
58F	TCT GGT AGT CAA GGC AGC AG	58R	ACA CCA GAG CCC TCC CAT A
59F	AGG CTT TGC ATC CCA CTC T	59R	AAC ATG GCG GTT CCT GTC
60F	GGA GGC ACT CTC CCT TCA G	60R	AGC CCA GAG ACC TCT TCC AG

