

Supplemental Data**Molecular Basis of AKAP Specificity****for PKA Regulatory Subunits**

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Table S1. Structural comparison of RII α D/D molecules

D/D Protomer	R.m.s.d. (Å) for equivalent C α -atoms			Ordered region
	¹ Apo 1	² AKAP- <i>IS</i> 1	AKAP- <i>IS</i> 2	
Apo 1	-	0.48	0.48	⁵ Ala 4 – ⁵ Ala 50
Apo 2	0.22	0.51	0.53	⁵ Ala 3 – ⁵ Ala 50
Apo 3	0.24	0.51	0.50	⁵ Ala 4 – ⁵ Ala 49
Apo 4	0.23	0.55	0.54	Ile 3 – His 49
Apo 5	0.20	0.50	0.50	Ile 3 – ⁵ Ala 50
Apo 6	0.14	0.48	0.46	⁵ Ala 3 – ⁵ Ala 50
Apo 7	0.19	0.44	0.48	Gln 4 – ⁵ Ala 48
Apo 8	0.26	0.55	0.49	Ile 3 – His 49
AKAP- <i>IS</i> 1	-	-	0.51	Ile 5 – Arg 43
AKAP- <i>IS</i> 2	-	-	-	Ile 3 – Arg 43
³ NMR D/D 1	1.03	0.95	0.82	
NMR D/D 2	1.03	0.95	0.82	
⁴ NMR D/D-HT31 1	1.65	1.22	1.07	
NMR D/D-HT31 2	0.86	0.84	0.73	

¹Apo: Apo RII D/D²AKAP-*IS*: RII D/D – AKAP-*IS* complex³NMR D/D: NMR structure of apo RII α D/D

⁴NMR D/D-HT31: NMR structure of RII α D/D-HT31 complex

⁵Denotes side chain built as Ala

Rmsd (Å) for equivalent C α -atoms

Apo-RII dimer vs. AKAP-*I*S-RII dimer: 0.62 Å

Apo-RII dimer (X-ray) vs. Apo-RII dimer (NMR): 1.25 Å

AKAP-*I*S-RII (X-ray) vs. Ht31-RII (NMR): 1.44 Å