

Supplementary Table 1. Intermolecular crosslinks found in this study.

Crosslinker	Crosslink type	Protein 1	Residue	Protein 2	Residue	Length in model (Å)	Used as restraints in EM model (Id)
DSS	Inter-protein	RBBP4/7	22/21	MTA1	462	17.5	D3
DSS	Inter-protein	RBBP4/7	22/21	MTA1	686	25.6	D5
DSS	Inter-protein	RBBP4	26	MTA1	509	17.1	D4
DSS	Inter-protein	RBBP4	120	MTA1	462	33.2	D2
DSS	Inter-protein	RBBP4	178	MTA1	626	Not in model	-
DSS	Inter-protein	RBBP4	215	MTA1	626	Not in model	-
DSS	Inter-protein	RBBP7 [†]	263	MTA1	532	28.1	D1
DSS	Inter-protein	RBBP4	317	MTA1	554	Not in model	-
DSS	Inter-protein	RBBP4	317	MTA1	686	21.7	D6
DSS	Inter-protein	RBBP4	156	RBBP7 [†]	119	84.1 (inconsistent with model)	-
DSS	Inter-protein	RBBP4	156	RBBP7 [†]	211	102.1 (inconsistent with model)	-
DSS	Inter-protein	RBBP4	160	RBBP7 [†]	119	78.7 (inconsistent with model)	-
DSS	Inter-protein	MBD2/3	190/46	HDAC1/2	89/90	Not in model	-
DSS	Intra-protein	RBBP7 [†]	119	RBBP7 [†]	159	6.2	-
DSS	Intra-protein	RBBP4	120	RBBP4	160	6.2	-
DSS	Intra-protein	RBBP4	156	RBBP4	215	14.5	-
DSS	Intra-protein	RBBP4	160	RBBP4	215	23.1	-
DSS	Intra-protein	MTA1	447	MTA1	527	25.9	D7
DSS	Intra-protein	MTA1	462	MTA1	509	19.7	D9
DSS	Intra-protein	MTA1	509	MTA1	532	27.0	D8

DSS	Intra-protein	MTA1	527	MTA1	532	13.8	-
DSS	Intra-protein	MTA1	532	MTA1	549	Not in model	-
DSS	Intra-protein	MTA1	532	MTA1	554	Not in model	-
DSS	Intra-protein	MTA1	532	MTA1	582	Not in model	-
DSS	Intra-protein	MTA1	532	MTA1	686	50 (inconsistent with model)	-
DSS	Intra-protein	MTA1	532	MTA1	626	Not in model	-
DSS	Intra-protein	MTA1	582	MTA1	670	Not in model	-
DSS	Intra-protein	MTA1	596	MTA1	626	Not in model	-
DSS	Intra-protein	MTA1	626	MTA1	686	Not in model	-
DSS	Intra-protein	MTA1	626	MTA1	670	Not in model	-
DSS	Intra-protein	MTA1	670	MTA1	686	22.0	D10
DSS	Intra-protein	MTA2/3 [†]	285/288	MTA2 [†]	323	Not in model	-
DSS	Intra-protein	MTA2 [†]	531	MTA2 [†]	539	Not in model	-
DSS	Intra-protein	MTA2 [†]	611	MTA2 [†]	618	Not in model	-
DSS	Intra-protein	CHD4	959	CHD4	969	Not in model	-
DSS	Intra-protein	HDAC1	457	HDAC1	466	Not in model	-
DSS	Intra-protein	HDAC2	462	HDAC2	468	Not in model	-
DSS	Intra-protein	MBD3	41	MBD2/3	46/190	Not in model	-
DSS	Intra-protein	MBD3	114	MBD3	124	Not in model	-
DSS	Intra-protein	GATA2DA	27	GATA2DA	30	Not in model	-
DSS	Intra-protein	GATA2DA	451	GATA2DA	459	Not in model	-
ADH	Inter-protein	RBBP4	104	MTA1	518	22.9	A1
ADH	Inter-protein	RBBP4	166	MTA1	511	30.7	A2

ADH	Intra-protein	RBBP4	5	RBBP4/7	20/19	21.1	-
ADH	Intra-protein	RBBP4	60	RBBP4	104	22.1	-
ADH	Intra-protein	RBBP4/7	124/123	RBBP4	166	7.7	-
ADH	Intra-protein	RBBP4/7	148/147	RBBP4	166	15.4	-
ADH	Intra-protein	RBBP4/7	153/152	RBBP4	162	16.1	-
ADH	Intra-protein	MTA1	488	MTA1	518	41.3 (inconsistent with model)	-
ADH	Intra-protein	MTA1	511	MTA1	518	15.1	-
ZLXL	Inter-protein	RBBP4/7	20/19	MTA1	582	Not in model	-
ZLXL	Inter-protein	RBBP4	104	MTA1	509	19.5*	Z1
ZLXL	Inter-protein	RBBP4/7	124/123	MTA1	582	Not in model	-
ZLXL	Intra-protein	RBBP4/7	148/147	RBBP4	215	12.2	-
ZLXL	Intra-protein	MTA1	488	MTA1	582	Not in model	-
ZLXL	Intra-protein	MTA1	511	MTA1	686	16.4	Z2
ZLXL	Intra-protein	MTA2	523	MTA2	539	Not in model	-
ZLXL	Intra-protein	CHD4	1060	CHD4	1064	Not in model	-

Notes: [†]Where possible, RBBP7 and MTA2 residues are mapped onto corresponding RBBP4 and MTA1 residues, respectively, in the EM model. *While this linker distance exceeds the theoretical limit of ~14 Å, residue RBBP4₁₀₄ is located on a flexible loop.