

**SUPPLEMENTARY ONLINE DATA****Protein network study of human AF4 reveals its central role in RNA
Pol II-mediated transcription and in phosphorylation-dependent regulatory
mechanisms**

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Figure S1 and Tables S1–S3 are on the pages that follow.

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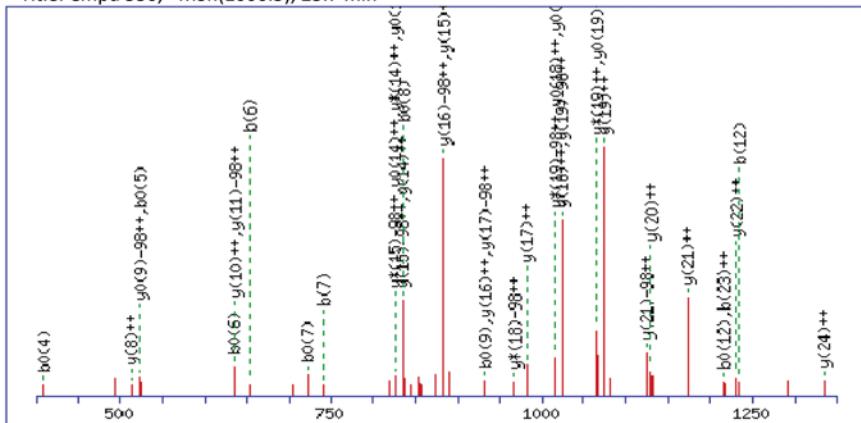


Mascot Search Results

Peptide ViewMS/MS Fragmentation of **ELSPLISLPSPVPLSPIHSNQQpTLPR**Found in **PI00396310**, Tax_Id=9606 Gene_Symbol=AFF1 AF4/FMR2 family, member 1

Match to Query 584: 2996.738172 from(999.920000,3+) intensity(1580476.0000)

Title: Cmpd 530, +MSn(1000.5), 23.7 min



The y_8^{2+} (512.2 m/z) and b_{23} (1216.6 m/z) ion fragments were ruled out phosphorylation at threonine 220 (The amino acid positions are referred to Swiss-Prot entry P51825)

Monoisotopic mass of neutral peptide Mr(calc): 2996.5736

Ions Score: 83 Expect: 2.4e-006

Matches (**Bold Red**): 41/422 fragment ions using 36 most intense peaks

#	b	b^{++}	b^*	b^{*++}	b^0	b^{0++}	Seq.	y	y^{++}	y^*	y^{*++}	y^0	y^{0++}	#
1	130.0499	65.5286			112.0393	56.5233	E							27
2	243.1339	122.0706			225.1234	113.0653	L	2868.538	1434.773	2851.512	1426.26	2850.528	1425.768	26
3	330.166	165.5866			312.1554	156.5813	S	2755.454	1378.231	2738.428	1369.718	2737.444	1369.226	25
4	427.2187	214.1113			409.2082	205.1077	P	2668.422	1334.715	2651.396	1326.202	2650.412	1325.71	24
5	540.3028	270.655			522.2922	261.6498	L	2571.369	1286.188	2554.343	1277.675	2553.359	1277.183	23
6	653.3869	327.1971			635.3763	318.1918	I	2458.285	1229.646	2441.259	1221.133	2440.275	1220.641	22
7	740.4189	370.7131			722.4083	361.7078	S	2345.201	1173.104	2328.175	1164.591	2327.191	1164.099	21
8	853.5029	427.2551			835.4924	418.2498	L	2258.169	1129.588	2241.143	1121.075	2240.159	1120.583	20
9	950.5557	475.7815			932.5451	466.7762	P	2145.085	1073.046	2128.059	1064.533	2127.075	1064.041	19
10	1037.588	519.2975			1019.577	510.2922	S	2048.033	1024.52	2031.006	1016.007	2030.022	1015.515	18
11	1134.641	567.8239			1116.63	558.8186	P	1961	981.0039	1943.974	972.4906	1942.99	971.9986	17
12	1233.709	617.3581			1215.698	608.3528	V	1863.948	932.4775	1846.921	923.9642	1845.937	923.4722	16
13	1330.762	665.8845			1312.751	656.8792	P	1764.879	882.9433	1747.853	874.43	1746.869	873.938	15
14	1427.814	714.4109			1409.804	705.4056	P	1667.827	834.4169	1650.8	825.9036	1649.816	825.4116	14
15	1540.899	770.9529			1522.888	761.9476	L	1570.774	785.8905	1553.747	777.3772	1552.763	776.8852	13
16	1627.931	814.4689			1609.92	805.4636	S	1457.69	729.3485	1440.663	720.8352	1439.679	720.3432	12
17	1724.983	862.9953			1706.973	853.99	P	1370.658	685.8325	1353.631	677.3192	1352.647	676.8272	11
18	1838.067	919.5373			1820.057	910.532	I	1273.605	637.3061	1256.578	628.7928	1255.594	628.3008	10
19	1975.126	988.0668			1957.116	979.0615	H	1160.521	580.764	1143.494	572.2508	1142.51	571.7588	9
20	2062.158	1031.583			2044.148	1022.578	S	1023.462	512.2346	1006.435	503.7213	1005.451	503.2293	8
21	2176.201	1088.604	2159.175	1080.091	2158.191	1079.599	N	936.4299	468.7186	919.4033	460.2053	918.4193	459.7133	7
22	2304.26	1152.634	2287.233	1144.12	2286.249	1143.628	Q	822.3869	411.6971	805.3604	403.1838	804.3764	402.6918	6
23	2432.318	1216.663	2415.292	1208.15	2414.308	1207.658	Q	694.3284	347.6678	677.3018	339.1545	676.3178	338.6625	5
24	2613.332	1307.17	2596.306	1298.657	2595.322	1298.165	T	566.2698	283.6385	549.2432	275.1253	548.2592	274.6332	4
25	2726.417	1363.712	2709.39	1355.199	2708.406	1354.707	L	385.2558	193.1315	368.2292	184.6183			3
26	2823.469	1412.238	2806.443	1403.725	2805.459	1403.233	P	272.1717	136.5895	255.1452	128.0762			2
27							R	175.119	88.0631	158.0924	79.5498			1

Figure S1 Mascot search results

MASCOT SEARCH RESULTS

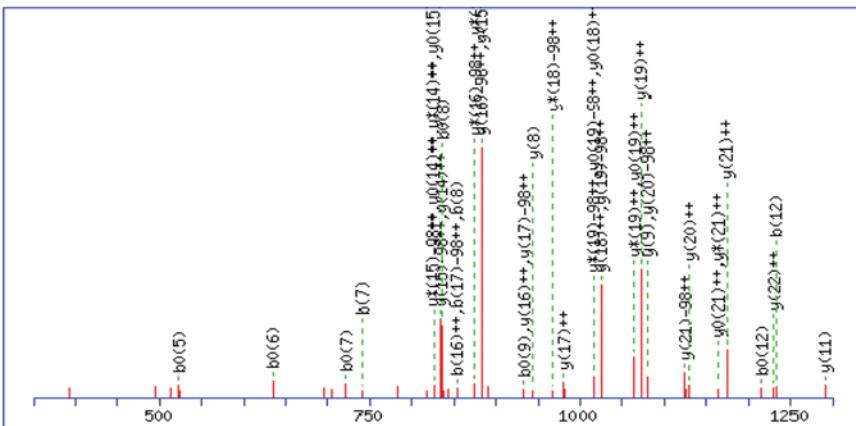
Peptide View

MS/MS Fragmentation of **ELSPLISLPSPVPPLpSPIHSNQQTLPR**

Found in **IPI00396310**, Tax_Id=9606 Gene_Symbol=AFF1 AF4/FMR2 family, member 1

Match to Query 569: 2996.648172 from(999.890000,3+) intensity(4982059.0000)

Title: Cmpd 524, +MSn(1000.5), 23.8 min



The y_{14}^{2+} (834.2 m/z) and y_{11} (1290.8 m/z) ion fragments were ruled out phosphorylation at serine 212. (The amino acid positions are referred to Swiss-Prot entry [P51825](#))

Monoisotopic mass of neutral peptide Mr(calc): 2996.5736

Ions Score: 47 Expect: 0.0093

Matches (**Bold Red**): 46/412 fragment ions using 43 most intense peaks

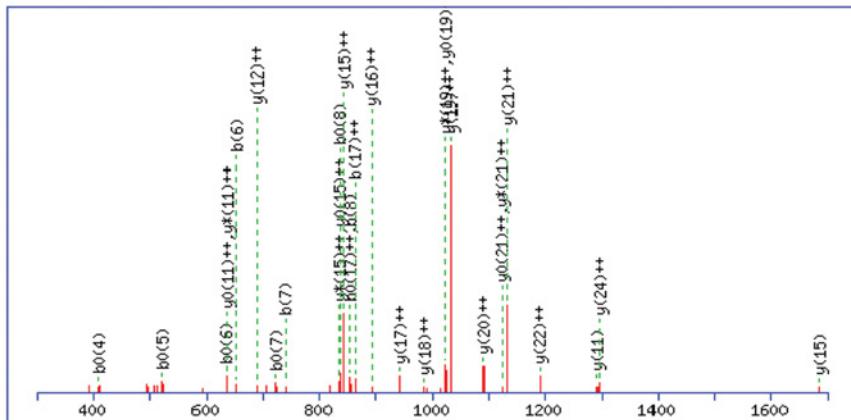
#	b	b^{++}	b^*	b^{*++}	b^0	b^{0++}	Seq.	y	y^{++}	y^*	y^{*++}	y^0	y^{0++}	#
1	130.0499	65.5286			112.0393	56.5233	E							27
2	243.1339	122.0706			225.1234	113.0653	L	2868.538	1434.773	2851.512	1426.26	2850.528	1425.768	26
3	330.166	165.5866			312.1554	156.5813	S	2755.454	1378.231	2738.428	1369.718	2737.444	1369.226	25
4	427.2187	214.113			409.2082	205.1077	P	2668.422	1334.715	2651.396	1326.202	2650.412	1325.71	24
5	540.3028	270.655			522.2922	261.6498	L	2571.369	1286.188	2554.343	1277.675	2553.359	1277.183	23
6	653.3869	327.1971			635.3763	318.1918	I	2458.285	1229.646	2441.259	1221.133	2440.275	1220.641	22
7	740.4189	370.7131			722.4083	361.7078	S	2345.201	1173.104	2328.175	1164.591	2327.191	1164.099	21
8	853.5029	427.22551			835.4924	418.2498	L	2258.169	1129.588	2241.143	1121.075	2240.159	1120.583	20
9	950.5557	475.7815			932.5451	466.7762	P	2145.085	1073.046	2128.059	1064.533	2127.075	1064.041	19
10	1037.588	519.2975			1019.577	510.2922	S	2048.033	1024.52	2031.006	1016.007	2030.022	1015.515	18
11	1134.641	567.8239			1116.63	558.8186	P	1961	981.0039	1943.974	972.4906	1942.99	971.9986	17
12	1233.709	617.3581			1215.698	608.3528	V	1863.948	932.4775	1846.921	923.9642	1845.937	923.4722	16
13	1330.762	665.8845			1312.751	656.8792	P	1764.879	882.9433	1747.853	874.43	1746.869	873.938	15
14	1427.814	714.4109			1409.804	705.4056	P	1667.827	834.4169	1650.8	825.9036	1649.816	825.4116	14
15	1540.899	770.9529			1522.888	761.9476	L	1570.774	785.8905	1553.747	777.3772	1552.763	776.8852	13
16	1707.897	854.4521			1689.886	845.4468	S	1457.69	729.3485	1440.663	720.8352	1439.679	720.3432	12
17	1804.95	902.9784			1786.939	893.9732	P	1290.691	645.8493	1273.665	637.336	1272.681	636.844	11
18	1918.034	959.5205			1900.023	950.5152	I	1193.639	597.3229	1176.612	588.8096	1175.628	588.3176	10
19	2055.093	1028.05			2037.082	1019.045	H	1080.555	540.7809	1063.528	532.2676	1062.544	531.7756	9
20	2142.125	1071.566			2124.114	1062.561	S	943.4956	472.2514	926.469	463.7381	925.485	463.2461	8
21	2256.168	1128.587	2239.141	1120.074	2238.157	1119.582	N	856.4635	428.7354	839.437	420.2221	838.453	419.7301	7
22	2384.226	1192.617	2367.2	1184.103	2366.216	1183.611	Q	742.4206	371.7139	725.3941	363.2007	724.4101	362.7087	6
23	2512.285	1256.646	2495.258	1248.133	2494.274	1247.641	Q	614.362	307.6847	597.3355	299.1714	596.3515	298.6794	5
24	2613.332	1307.17	2596.306	1298.657	2595.322	1298.165	T	486.3035	243.6554	469.2769	235.1421	468.2929	234.6501	4
25	2726.417	1363.712	2709.39	1355.199	2708.406	1354.707	L	385.2558	193.1315	368.2292	184.6183			3
26	2823.469	1412.238	2806.443	1403.725	2805.459	1403.233	P	272.1717	136.5895	255.1452	128.0762			2
27							R	175.119	88.0631	158.0924	79.5498			1

Figure S1 Continued

 **Mascot Search Results**
Peptide ViewMS/MS Fragmentation of **ELSPISLPSPVPLSPIHSNQQTLPR**Found in **IPI00396310**, Tax_Id=9606 Gene_Symbol=AFF1 AF4/FMR2 family, member 1

Match to Query 574: 2916.758172 from(973.260000,3+) intensity(1800511.0000)

Title: Cmpd 533, +MSn(973.8), 24.1 min



Monoisotopic mass of neutral peptide Mr(calc): 2916.6073

Fixed modifications: Carbamidomethyl (C)

Ions Score: 51 Expect: 0.0037

Matches (**Bold Red**): 30/266 fragment ions using 38 most intense peaks

#	b	b ⁺⁺	b*	b* ⁺⁺	b ⁰	b ^{0⁺⁺}	Seq.	y	y ⁺⁺	y*	y* ⁺⁺	y ⁰	y ^{0⁺⁺}	#	
1	130.0499	65.5286			112.0393	56.5233	E								27
2	243.1339	122.0706			225.1234	113.0653	L	2788.572	1394.79	2771.545	1386.276	2770.561	1385.784	26	
3	330.166	165.5866			312.1554	156.5813	S	2675.488	1338.248	2658.461	1329.734	2657.477	1329.242	25	
4	427.2187	214.113			409.2082	205.1077	P	2588.456	1294.732	2571.429	1286.218	2570.445	1285.726	24	
5	540.3028	270.655			522.2922	261.6498	L	2491.403	1246.205	2474.377	1237.692	2473.393	1237.2	23	
6	653.3869	327.1971			635.3763	318.1918	I	2378.319	1189.663	2361.293	1181.15	2360.309	1180.658	22	
7	740.4189	370.7131			722.4083	361.7078	S	2265.235	1133.121	2248.208	1124.608	2247.224	1124.116	21	
8	853.5029	427.2551			835.4924	418.2498	L	2178.203	1089.605	2161.176	1081.092	2160.192	1080.6	20	
9	950.5557	475.7815			932.5451	466.7762	P	2065.119	1033.063	2048.092	1024.55	2047.108	1024.058	19	
10	1037.588	519.2975			1019.577	510.2922	S	1968.066	984.5367	1951.04	976.0234	1950.056	975.5314	18	
11	1134.641	567.8239			1116.63	558.8186	P	1881.034	941.0207	1864.008	932.5074	1863.024	932.0154	17	
12	1233.709	617.3581			1215.698	608.3528	V	1783.981	892.4943	1766.955	883.981	1765.971	883.489	16	
13	1330.762	665.8845			1312.751	656.8792	P	1684.913	842.9601	1667.886	834.4468	1666.902	833.9548	15	
14	1427.814	714.4109			1409.804	705.4056	P	1587.86	794.4337	1570.834	785.9204	1569.85	785.4284	14	
15	1540.899	770.9529			1522.888	761.9476	L	1490.807	745.9073	1473.781	737.3941	1472.797	736.9021	13	
16	1627.931	814.4689			1609.92	805.4636	S	1377.723	689.3653	1360.697	680.852	1359.713	680.36	12	
17	1724.983	862.9953			1706.973	853.99	P	1290.691	645.8493	1273.665	637.336	1272.681	636.844	11	
18	1838.067	919.5373			1820.057	910.532	I	1193.639	597.3229	1176.612	588.8096	1175.628	588.3176	10	
19	1975.126	988.0668			1957.116	979.0615	H	1080.555	540.7809	1063.528	532.2676	1062.544	531.7756	9	
20	2062.158	1031.583			2044.148	1022.578	S	943.4956	472.2514	926.469	463.7381	925.485	463.2461	8	
21	2176.201	1088.604	2159.175	1080.091	2158.191	1079.599	N	856.4635	428.7354	839.437	420.2221	838.453	419.7301	7	
22	2304.26	1152.634	2287.233	1144.12	2286.249	1143.628	Q	742.4206	371.7139	725.3941	363.2007	724.4101	362.7087	6	
23	2432.318	1216.663	2415.292	1208.15	2414.308	1207.658	Q	614.362	307.6847	597.3355	299.1714	596.3515	298.6794	5	
24	2533.366	1267.187	2516.34	1258.673	2515.356	1258.181	T	486.3035	243.6554	469.2769	235.1421	468.2929	234.6501	4	
25	2646.45	1323.729	2629.424	1315.215	2628.44	1314.723	L	385.2558	193.1315	368.2292	184.6183			3	
26	2743.503	1372.255	2726.476	1363.742	2725.492	1363.25	P	272.1717	136.5895	255.1452	128.0762			2	
27							R	175.119	88.0631	158.0924	79.5498			1	

Figure S1 Continued

Table S1 Identification of AF4-1-interacting proteins by nano-LC-ESI-MS/MS

Gene symbol	Identified peptide sequence	Precursor mass (<i>m/z</i>)	Charge state (z)	Mass errors (p.p.m.)	Single peptide Mascot score	Sequence coverage
Transcription regulatory protein						
<i>PPARBP</i>	SLGMNASVIEGTSAVYK	922.54	2+	16	77	3%
	GNNQADTVDFSIISVAGK	918.55	2+	16	71	
<i>MED12</i>	IEGTLGVLYDQPR	730.89	2+	0	67	2%
	LNLVGGMFDVTQR	733.41	2+	47	68	
<i>CRSP2</i>	FLGSVIMR	469.87	2+	23	41	8%
	AGTSSQTMPTNMPPPR	852.90	2+	11	41	
	SLLDCTFR	506.44	2+	37	45	
	ENIQDLVFR	567.50	2+	35	49	
	DGAYSLFDNSK	608.86	2+	31	43	
	LELFPDQATQLK	701.91	2+	42	47	
	QGECTIFAAVR	626.36	2+	39	47	
	LVEGFYPAPGLK	645.95	2+	39	48	
	LEILVEDKETGDGR	671.45	3+	27	61	
	TFLNMFVDSNQDAR	837.45	2+	17	94	
<i>CRSP3</i>	EVGNALLNVLK	635.07	2+	18	47	9%
	NALADFPLVMK	617.91	2+	12	43	
	FLELLPVSK	523.41	2+	17	43	
	LITALGSSEVQPQFTR	874.03	2+	13	46	
	LFDLILYPEK	569.48	2+	29	54	
	NACLLPAYFAVTEIR	869.48	2+	28	54	
	SSVALAPALVETYSR	782.50	2+	10	55	
	EVGNALLNVLK	635.07	2+	29	61	
	TVLSAESELNR	674.33	2+	14	71	
<i>THRAP4</i>	QLAGPLFSENTLQFYNER	1064.10	2+	15	43	4%
	GSVLQFMPETTVSELVK	950.20	2+	10	40	
<i>CRSP6</i>	AAATIDSLASR	538.30	2+	37	57	6%
	VLITSQGYEQICK	769.95	2+	35	76	
<i>CRSP7</i>	LLQAIDPQSNIR	684.38	2+	14	45	6%
	AGLSPAEPILLSR	605.89	2+	7	54	
	NEIIQSYLSR	611.82	2+	8	51	
<i>RBBP4</i>	TPSSDVLFVDTK	736.38	2+	27	104	4%
<i>RUVBL2</i>	GLGLDDALEPR	578.75	2+	80	50	3%
<i>EAF1</i>	GDEVTITLPHIPGSTPPMTVFK	785.06	3+	17	70	9%
<i>MED4</i>	LLSALEDLEVLSR	729.44	2+	20	73	17%
	EAEQILATAVYQAK	767.75	2+	26	76	
	LGGGLGVAGGNSTR	608.33	2+	26	62	
<i>CRSP8</i>	GYNENVYTEDGK	694.85	2+	12	64	33%
	AFIAHFQDNLHSVNR	590.37	2+	18	51	
	AQPTTLVLPPOYYVDDVISR	704.66	3+	8	48	
	SNYQVFQK	507.26	2+	9	47	
<i>MED7</i>	EYTDENIQUEGLAPKPPPPIK	514.33	3+	58	44	9%
<i>MED6</i>	VDALLLDLR	514.39	2+	15	47	17%
	QRVDALLLDLR	647.92	2+	7	47	
	VLTAVHGIOSAFDEAMSYCR	757.73	3+	12	48	
<i>MED8</i>	NQVIIPLVSPDR	732.46	2+	34	65	23%
	VPVFSHEVPDHLR	544.35	3+	10	40	
	QTFNPTDTNALVAAVAFGK	983.07	2+	16	115	
	NQVIIPLVSPDRDEDLMR	741.72	3+	13	44	
<i>TRPF</i>	SVQQTVELLTR	637.38	2+	31	53	10%
	YQYCDFLVK	618.20	2+	16	56	
<i>MED21</i>	IQSALADIAQSQLK	743.44	2+	40	55	10%
<i>ELL</i>	TSLLLLR	405.29	2+	22	49	5%
	EPVQALPSSASR	924.12	2+	0	41	
<i>PCQAP</i>	TFVPAMTAIHGPITAPVVCTR	784.68	2+	18	46	12%
	QSIPSVLQGEVAR	692.45	2+	14	58	
	SLLDIITDPSK	601.51	3+	19	61	
<i>TCEA1</i>	NIPMTLELLQSTR	766.43	2+	39	63	5%
DNA-directed RNA polymerase						
<i>POLR2A</i>	TVITDPNLSIDQVGVPR	961.01	2+	16	61	1%
<i>POLR2B</i>	AGVSQVLNR	472.27	2+	0	45	4%
	NLTYSAPLYDITK	799.43	2+	6	47	
	TVTLPENEDELESTNR	923.89	2+	18	60	
<i>POLR2C</i>	ITELTDENVK	581.27	2+	10	55	12%
	LGLIPLISDDIVDK	755.92	2+	12	42	
	FIIENTDLAVANSIR	838.42	2+	16	82	

Table S1 Continued

Gene symbol	Identified peptide sequence	Precursor mass (<i>m/z</i>)	Charge state (z)	Mass errors (p.p.m.)	Single peptide Mascot score	Sequence coverage
DNA-binding protein						
<i>MCM3</i>	GSSGVGLTAAVTTDQETGER	968.44	2+	20	100	3%
<i>RUVBL1</i>	TALALAIAQELGSK	693.38	2+	14	70	3%
RNA-binding protein						
<i>NCL</i>	SISLYYTGEK	580.96	2+	28	47	8%
	GFGFVDFNSEDAK	781.40	2+	17	50	
	NDLAVVDVR	500.84	2+	13	55	
<i>PRPF31</i>	GLSEDTTEETLKESFDGSVR	734.06	3+	13	62	
	IYEYVESR	529.66	2+	18	47	14%
	LGLTEIR	401.20	2+	11	47	
	IMGVAGGLTNLSK	638.87	2+	39	64	
	MPACNIMLLGAQR	754.01	2+	19	40	
	SSGTASSVAFTPLQGLEIVNPQAAEK	868.14	3+	27	41	
<i>SNRPD2</i>	GDSVIVLRL	479.27	2+	16	47	17%
Protein serine/threonine kinase protein						
<i>CDK9</i>	LADFGLAR	431.75	2+	11	42	43%
	LLVLDPAQR	512.84	2+	18	42	
	DPYALDLIDK	581.80	2+	8	54	
	IQGGTFGEVFK	591.81	2+	0	63	
	NPATTNQTEFER	704.33	2+	0	65	
	HENVVNLLIEICR	784.45	2+	8	72	
	AYVRDPYALDLIDK	551.32	2+	18	45	
	NPATTNQTEFERVF	827.70	2+	16	59	
	QYDSVECPFCDEVS	931.84	2+	13	63	
	VLMENEKEGPITALR	621.67	3+	16	42	
	VVTLWYRPPPELLGER	647.93	3+	15	45	
Serine/threonine phosphatase protein						
<i>PPP2R1A</i>	IGPILDNSTLQSEVKPILEK	732.21	3+	26	55	6%
	VLAMSGDPNYLHR	496.78	3+	17	47	
Translation regulator protein						
<i>EEF1B2</i>	SPAGLQLVNDYLADK	802.45	2+	43	88	7%
Auxiliary transport protein						
<i>GDI2</i>	LYSESALAR	469.70	2+	16	42	4%
	FVSISDLLVPK	609.30	2+	18	48	
	TDDYLDQPCYETINR	952.30	2+	14	49	
Receptor signalling complex scaffold protein						
<i>YWHAE</i>	EAAENSLLVAK	597.84	2+	12	41	29%
	DSTLIMQLLR	603.33	2+	0	51	
	EALQDVEDENQ	645.21	2+	10	56	
	VAGMDVLTVEER	732.36	2+	6	97	
	LICCDILDVDLDK	738.93	2+	14	74	
	AASDIAMTELPPTHPIR	612.70	2+	15	76	
<i>YWHAQ</i>	DSTLIMQLLR	595.32	2+	13	49	38%
	YLAEVACGDDR	634.73	2+	18	59	
	YLIANATNPESK	660.83	2+	13	65	
	SICTVLELLDK/AVTEQGAELSNEER	696.45	2+	10	73	
	QTIDNSQGAYQEAFDISK	766.99	2+	16	97	
	QTIDNSQGAYQEAFDISKK	999.51	2+	10	81	
<i>SPIN</i>	VSALEVLPDR	549.81	2+	18	57	4%
<i>AP3S1</i>	SEAGLAGAPAR	500.27	2+	39	55	6%
Signal transduction						
<i>CCNT1</i>	QLENMEANVK	587.87	2+	17	48	38%
	QQAANLLQDMGQR	736.55	2+	27	71	
	TYSLSSSSSSSSTR	792.37	2+	12	88	
	GPSEETGGAVFDHPAK	800.02	2+	11	78	
	MPIEGSENPERPFLEK	940.48	2+	26	40	
	SQYAYAAQNLLSHHDHSVILK	857.12	2+	27	73	
	SGNTDKPRPPPLPSEPPPPPLPK	876.24	3+	18	50	
	TSENALTGVDHSLPQDGNSNAFISQK	910.82	3+	16	60	
<i>S100A8</i>	LLETCPQYIR	711.37	2+	14	53	25%
<i>S100A9</i>	NIETINTFHQYSVK	904.09	2+	12	54	21%
	KDLQNFLK	503.28	2+	19	42	
Transmembrane receptor protein tyrosine kinase protein						
<i>FGFR2</i>	NVLVTENNVMKIADFGLAR	702.03	3+	19	40	3%
Lipid kinase protein						

Table S1 Continued

Gene symbol	Identified peptide sequence	Precursor mass (<i>m/z</i>)	Charge state (<i>z</i>)	Mass errors (p.p.m.)	Single peptide Mascot score	Sequence coverage
<i>PIP5K2B</i>	FGIDDQDYQNSVTR	829.33	2+	14	88	8%
	FFGPGEFDPSVDVYAMK	961.47	2+	16	42	
<i>PIP5K2C</i>	FGIDDQDYVLSLTR	821.49	2+	17	96	11%
	VSVDNEDSYMLVMR	837.40	2+	24	94	
Heterotrimeric G-protein GTPase protein	DRFGIDDDQDYLVSLTR	638.40	3+	13	57	
<i>GNB4</i>	LIIWDSYTNNK	677.32	2+	44	43	7%
Guanyl-nucleotide-exchange factor protein						
<i>ARHGEF4</i>	YPLQLAELLK	594.31	2+	15	41	2%
Enzyme: dehydrogenase						
<i>GAPDH</i>	VPTANVSVDLTCR	765.90	2+	0	68	13%
	LISWYDNEFGYSNR	882.35	2+	10	64	
Enzyme: synthase						
<i>PTS</i>	VYETDNNIVVYKGE	821.83	2+	73	47	10%
Unknown						
<i>SMAD9</i>	VETPVLPVLVPR	708.45	2+	21	52	6%
	FCLGLLSNVNR	646.84	2+	7	56	
<i>LSM14A</i>	EFADFEYR	538.75	2+	18	49	12%
	SFFDNISCDNDR	745.35	2+	6	71	
<i>DRG1</i>	DFDFESANAQFNK	766.86	2+	32	70	
	YEGILYTIDTENSTVALAK	1051.06	2+	19	83	
<i>HCCA2</i>	IQLLDLPGIIEGAK	740.41	2+	27	41	4%
<i>C20orf11</i>	LVTDEDVFPTK	632.34	2+	14	55	10%
	EFPSSFESLVR	649.36	2+	23	59	
	LIMNYLVTEGFK	714.36	2+	17	13	6%

Table S2 Analysis of control lane by nano-LC-ESI-MS/MS

Gene symbol	Identified Peptide sequence	Precursor mass (<i>m/z</i>)	Charge state (z)	Mass errors (p.p.m.)	Single peptide Mascot acore	Sequence coverage
FLNA	VANPSGNLTETYVQDR	767,51	2+ 2+ 2+	0	74	4%
	GAGTGGGLGAAVEGPSEAK	785,93	2+	31	42	
	ANLPQSFQVDTSK	882,43	2+	62	41	
JAK1	LSDPGIPITVLSR	684,39	2+	14	41	3%
	SDVLTTPWKFK	661,34	2+	15	48	
	LTDNGTEFSVK	605,83	2+	59	47	
KIF11	TTAATLMNAYSSR	701,88	2+	64	55	9%
	ETTIDGEELVK	617,32	2+	16	47	
	EEYITSALESTEEK	814,92	2+	48	94	
PRMT5	FCALEEK	448,73	2+	33	48	10%
	CENIQKPLSSVQENIQQK	715,02	3+	18	60	
	SKVETTEHVLVTK	500,96	3+	53	64	
HSPA1A	SDLLLSGR	430,76	2+	33	49	9%
	KGFPVLSK	438,30	2+	68	42	
	YSQYQQAIYK	646,33	2+	15	74	
PPM1B	DTNVQVLMVLGAGR	744,94	2+	60	77	8%
	GPLVNASLR	463,81	2+	10	40	
	DPEAQFEMPYVVR	798,80	2+	37	62	
STK38	NQVALNPQNTVFDAKR	605,63	3+	44	40	11%
	ATAGDTHLGGEDFDNR	838,37	2+	0	56	
	ARFEELCSDLFR	771,89	2+	25	57	
PFKFB3	GGSGSGPTIEEVD	602,77	2+	0	48	6%
	YGLSSMQGWR	600,77	2+	8	50	
	HIYFINCGDSR	691,34	2+	28	55	
TUBB	DNMSIVLVCFSNAPK	855,96	2+	52	80	12%
	LGEDFESLK	575,56	2+	78	58	
	DIKPDLNLDSK	457,60	3+	22	53	
TUBB2C	LSDFGLCTGLK	605,79	2+	33	53	8%
	IGAPGVVEIK	506,74	2+	88	65	
	RFEGLTAR	475,22	2+	94	42	
HNRPH1	STIQTAEALR	545,17	2+	73	37	12%
	YPTGESYQDLVQR	778,04	2+	43	61	
	VFNVGEYR	492,24	2+	20	44	
ACTB	ISVYYNEATGGK	651,2	2+	84	59	16%
	AILVDLEPGTMDSVR	816,37	2+	64	55	
	IMNTFSVPSPK	668,28	2+	104	78	
TRIM21	LAVNMVPFPR	580,27	2+	86	51	4%
	AVLVDLEPGTMDSVR	809,37	2+	49	41	
	FPGQLNADLR	565,75	2+	53	44	
MYC	LAVNMVPFPR	580,27	2+	86	51	5%
	GLPWSCSADEVQR	752,78	2+	86	63	
	SNNVEMDWVLK	675,78	2+	59	58	
WDR77	YGDGGSTFQSTTGHCVHMR	705,24	3+	85	41	8%
	VHIEIGPDGR	546,80	2+	9	42	
	EGGQIAVFDATNTTR	790,29	2+	126	58	
TUBA1A	YPTGESYQDLVQR	778,26	2+	140	109	5%
	LEPVIMELR	622,74	2+	144	41	
	EIDLVLDR	543,29	2+	46	41	
ATP5A1	DVNAAIATIK	508,23	2+	128	58	4%
	VVDALGNADGK	586,28	2+	68	52	
	AVDSLVPIGR	513,79	2+	19	40	
ETPPLVPPAAR	NFLVEEQR	582,33	2+	68	37	16%
	DLDITSPCLR	579,79	2+	25	62	
	EITALAPSTMK	560,77	2+	62	40	
SDGALLGASSLSGR	IGGIGTVPVGR	513,30	2+	19	64	8%
	AVFPSIVGRPR	559,91	2+	91	49	
	DSYVGDEAQSKR	977,51	2+	22	61	
ETPPLVPPAAR	GYSFTTAER	566,77	2+	8	50	8%
	SYELPDGQVITIGNER	895,93	2+	22	52	
	ETPPLVPPAAR	622,8	2+	67	44	
SDGALLGASSLSGR	SDGALLGASSLSGR	702,37	2+	14	87	9%

Table S3 *In silico* analysis of AF4 interactors by HPRD (<http://www.hprd.org>)

Gene name	Interactors	Type of interaction
Transcription regulatory protein <i>PPARBP</i>	14-3-3 Eta (*) Androgen receptor CRSP2 (*) Estrogen receptor alpha Estrogen receptor beta GATA binding protein 1 GATA binding protein 3 Hepatocyte nuclear factor 4 alpha Nuclear receptor subfamily 4, group A, member 1 Peroxisome proliferator activated receptor gamma Peroxisome proliferator activated receptor, alpha RAR related orphan receptor A Retinoid X receptor, alpha TRAP230 (*) Vitamin D receptor p53 NR113 TRAP220 (*) PPAR gamma coactivator 1 Retinoic acid receptor alpha Mediator of RNA polymerase II transcription subunit 8 (*) Thyroid hormone receptor alpha Thyroid hormone receptor, beta GATA binding protein 4 GATA binding protein 6 Mediator of RNA polymerase II transcription subunit 25 homologue MED9 Surfeit 5 TRAP230 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1 Vitamin D receptor interacting protein (*) Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7 Thyroid hormone receptor associated protein 1 TRAP230 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*)	Direct Complex Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Cyclin C CRSP2 (*) RNA polymerase II transcriptional regulation mediator (*) Cyclin dependent kinase 8 TRAP100 (*) SRB7 Cyclin C Cyclin dependent kinase 8 Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Trf proximal protein Mediator of RNA polymerase II transcription, subunit 31 homologue TRAP 80 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Thyroid hormone receptor associated protein 6 SRB7 TRAP100 (*) TRAP95 CRSP9 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 CRSP9 (*) Mediator complex subunit 28 Surfeit 5 Similar to HSPC296 MED9 CRSP9 (*) Mediator complex subunit 28 TRAP230 (*) TRAP 80 (*) Cyclin C Cyclin dependent kinase 8 Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 Intersex like Thyroid hormone receptor associated protein 6 RING3 Cyclin dependent kinase 8 RNA polymerase IIA 220 kd subunit CRSP2 (*)	Complex
	Thyroid hormone receptor associated protein 1 TRAP230 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine Mediator of RNA polymerase II transcription subunit 25 homologue	Complex
		Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
	Acyl-coenzyme A dehydrogenase 8	
	Actin related protein 2/3 complex subunit 2, 34kDa	
	RNA polymerase II transcriptional regulation mediator (*)	
	Mediator of RNA polymerase II transcription subunit 8 (*)	
	Peroxisome proliferator activated receptor, alpha	
	CREBBP	Complex
	ATP binding cassette, subfamily C, member 9	
	SRC1	
	E1A binding protein p300	
	Tryptophan rich basic protein	
	PPAR gamma coactivator 1	
	Nuclear receptor coactivator 6	
	TRAP100 (*)	
	Nuclear receptor coactivator 6 interacting protein	
	TRAP100 (*)	
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	TRAP 80 (*)	
	Transcriptional coactivator CRSP70 (*)	
	RNA polymerase II transcriptional regulation mediator (*)	
	SRB7	
	SRB7	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Positive cofactor 2 glutamine	
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	Cyclin dependent kinase 8	
	RNA polymerase II transcriptional regulation mediator (*)	
	CRSP4	
	CRSP5	
	CRSP2 (*)	
	TRAP 80 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Transcriptional coactivator CRSP70 (*)	
	Transcriptional coactivator CRSP34 (*)	
	CRSP9 (*)	
	TRAP230 (*)	
	Cyclin dependent kinase 8	
	TRAP220 (*)	
	Transcriptional coactivator CRSP70 (*)	
	Lysosomal trafficking regulator	
	SOX9	
	Mediator of RNA polymerase II transcription subunit 8 (*)	
	Thyroid hormone receptor associated protein 1	
	MED9	
	Surfeit 5	
	TRAP220 (*)	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Positive cofactor 2 glutamine	
	TRAP100 (*)	
	Transcriptional coactivator CRSP70 (*)	
	Cyclin dependent kinase 8	
	Cell division cycle 2 like 1	
	Vitamin D receptor interacting protein (*)	
	Mediator of RNA polymerase II transcription subunit 19	
	RNA polymerase II transcriptional regulation mediator (*)	
	Mediator of RNA polymerase II transcription subunit 8 (*)	
MED18		
	Trf proximal protein	
	MED9	
	TRAP95	
	Mediator complex subunit 28	
	THRAP2	
	Thyroid hormone receptor associated protein 1	
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	TRAP 80 (*)	
	CRSP9 (*)	
	MED9	
	Intersex like	

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7 Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 CRSP9 (*) Thyroid hormone receptor associated protein 1 TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Cyclin C	Complex
	Cyclin dependent kinase 8 Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Trf proximal protein Mediator of RNA polymerase II transcription, subunit 31 homologue TRAP 80 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Thyroid hormone receptor associated protein 6 SRB7 TRAP100 (*) TRAP95 CRSP9 (*) Mediator complex subunit 28 Surfeit 5 Similar to HSPC296 MED9 CRSP9 (*) Mediator complex subunit 28 TRAP220 (*) TRAP 80 (*) Cyclin C Cyclin dependent kinase 8 Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 Intersex like	Complex
		Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
<i>CRSP2</i>	Thyroid hormone receptor associated protein 6 CRSP2 (*) Thyroid hormone receptor associated protein 1 TRAP220 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine Mediator of RNA polymerase II transcription subunit 25 homologue Acyl-coenzyme A dehydrogenase 8 Actin related protein 2/3 complex subunit 2, 34kDa RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Glucocorticoid receptor Androgen receptor Hepatocyte nuclear factor 4 alpha STAT2 TRAP220 (*) Intersex like MED9 Surfeit 5 TRAP230 (*) TRAP220 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1 Vitamin D receptor interacting protein (*) Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Cyclin C RNA polymerase II transcriptional regulation mediator (*) Cyclin dependent kinase 8 TRAP220 (*) TRAP100 (*)	Complex Complex Direct Direct Direct Direct Direct Direct Direct Direct Complex
<i>SRB7</i>		Complex
<i>Cyclin C</i>		Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
SRB7		
Cyclin C		Complex
Cyclin dependent kinase 8		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
Trf proximal protein		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
TRAP 80 (*)		
Mediator complex subunit 28		
Thyroid hormone receptor associated protein 1		
TRAP230 (*)		
TRAP220 (*)		
Transcriptional coactivator CRSP130 (*)		
Thyroid hormone receptor associated protein 6		
SRB7		
TRAP100 (*)		
TRAP95		
CRSP9 (*)		
Mediator complex subunit 28		Complex
Thyroid hormone receptor associated protein 1		
TRAP230 (*)		
TRAP220 (*)		
Transcriptional coactivator CRSP130 (*)		
TRAP100 (*)		
TRAP95		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80 (*)		
Transcriptional coactivator CRSP70 (*)		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
SRB7		
CRSP9 (*)		
Thyroid hormone receptor associated protein 1		
TRAP230 (*)		Complex
TRAP220 (*)		
Transcriptional coactivator CRSP130 (*)		
Positive cofactor 2 glutamine		
Mediator of RNA polymerase II transcription subunit 25 homologue		
Acyl-coenzyme A dehydrogenase 8		
Actin related protein 2/3 complex subunit 2, 34kDa		
RNA polymerase II transcriptional regulation mediator (*)		
Mediator of RNA polymerase II transcription subunit 8 (*)		
RNA polymerase II transcriptional regulation mediator (*)		
Cyclin dependent kinase 8		
Cyclin C		
SRB7		
Mediator complex subunit 28		Complex
TRAP95		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
MED18		
Trf proximal protein		
SRB7		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
TRAP95		
TRAP 80 (*)		
Transcriptional coactivator CRSP130 (*)		
TRAP100 (*)		
Trf proximal protein		
Thyroid hormone receptor associated protein 6		
SRB7		
PC2		
TRAP100 (*)		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80 (*)		
Transcriptional coactivator CRSP70 (*)		
RNA polymerase II transcriptional regulation mediator (*)		

Table S3 Continued

Gene name	Interactors	Type of interaction
	SRB7 SRB7 TRAP220 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine CRSP4 CRSP5 TRAP 80 (*) TRAP220 (*) Transcriptional coactivator CRSP130 (*) Transcriptional coactivator CRSP70 (*) Transcriptional coactivator CRSP34 (*) CRSP9 (*) CCAAT/Enhancer binding protein, beta E74 like factor 3 Nuclear receptor coactivator 6 Thyroid hormone receptor associated protein 1 Pumilio2 WD and tetratricopeptide repeats 1 Forkhead box J3 MED9 Surfeit 5 TRAP230 (*) TRAP220 (*) CRSP2 (*) Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1 Vitamin D receptor interacting protein (*) Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7	Complex
	Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Cyclin C Cyclin dependent kinase 8	Complex
		Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Trf proximal protein Mediator of RNA polymerase II transcription, subunit 31 homologue TRAP 80 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Thyroid hormone receptor associated protein 6 SRB7 TRAP100 (*) TRAP95 CRSP9 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) TRAP100 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 CRSP9 (*) CRSP2 (*) Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) Positive cofactor 2 glutamine Mediator of RNA polymerase II transcription subunit 25 homologue Acyl-coenzyme A dehydrogenase 8 Actin related protein 2/3 complex subunit 2, 34kDa RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Mediator of RNA polymerase II transcription, subunit 31 homologue CRSP2 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) TRAP95 TRAP 80 (*) TRAP100 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 PC2 TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 SRB7 TRAP220 (*) CRSP2 (*) Positive cofactor 2 glutamine CRSP4 CRSP5 CRSP2 (*) TRAP 80 (*) TRAP220 (*) Transcriptional coactivator CRSP70 (*) Transcriptional coactivator CRSP34 (*) CRSP9 (*)	Complex
THRAP4	Estradiol receptor alpha	Direct

Table S3 Continued

Gene name	Interactors	Type of interaction
	Peroxisome proliferator activated receptor gamma	Direct
	Peroxisome proliferator activated receptor, alpha	Direct
	Retinoid X receptor, alpha	Direct
MED9		Direct
Surfeit 5		Direct
TRAP230 (*)		Complex
TRAP220 (*)		
CRSP2 (*)		
Transcriptional coactivator CRSP130 (*)		
Positive cofactor 2 glutamine		
Transcriptional coactivator CRSP70 (*)		
Cyclin dependent kinase 8		
Cell division cycle 2 like 1		
Vitamin D receptor interacting protein (*)		
Mediator of RNA polymerase II transcription subunit 19		
RNA polymerase II transcriptional regulation mediator (*)		
Mediator of RNA polymerase II transcription subunit 8 (*)		
MED18		
Trf proximal protein		
MED9		
TRAP95		
Mediator complex subunit 28		
THRAP2		
Thyroid hormone receptor associated protein 1		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80 (*)		
CRSP9 (*)		
MED9		
Intersex like		
Thyroid hormone receptor associated protein 6		
Mediator complex subunit 28		
Similar to HSPC296		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
SRB7		
Thyroid hormone receptor associated protein 1		Complex
TRAP230 (*)		
TRAP220 (*)		
CRSP2 (*)		
Transcriptional coactivator CRSP130 (*)		
Positive cofactor 2 glutamine		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80 (*)		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
Mediator of RNA polymerase II transcription subunit 8 (*)		
Trf proximal protein		
Thyroid hormone receptor associated protein 6		
SRB7		
CRSP9 (*)		
Mediator complex subunit 28		
Cyclin C		Complex
CRSP2 (*)		
RNA polymerase II transcriptional regulation mediator (*)		
Cyclin dependent kinase 8		
TRAP220 (*)		
SRB7		
Cyclin C		Complex
Cyclin dependent kinase 8		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
Trf proximal protein		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
TRAP 80 (*)		
Mediator complex subunit 28		
Thyroid hormone receptor associated protein 1		
TRAP230 (*)		
TRAP220 (*)		
CRSP2 (*)		
Transcriptional coactivator CRSP130 (*)		

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Thyroid hormone receptor associated protein 6 SRB7 TRAP95 CRSP9 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 CRSP9 (*) Peroxisome proliferator activated receptor, alpha CREBPP ATP binding cassette, subfamily C, member 9 SRC1 E1A binding protein p300 Tryptophan rich basic protein TRAP220 (*) PPAR gamma coactivator 1 Nuclear receptor coactivator 6 Nuclear receptor coactivator 6 interacting protein Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 SRB7 TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine Mediator of RNA polymerase II transcription, subunit 31 homologue CRSP2 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) TRAP95 TRAP 80 (*) Transcriptional coactivator CRSP130 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 PC2	Complex
<i>CRSP6</i>	Mediator of RNA polymerase II transcription subunit 19 Surfeit 5 Thyroid hormone receptor associated protein 6 p53 Mediator of RNA polymerase II transcription subunit 8 (*) Ubiquitin specific protease 49 BRCA1 BRCA1 associated ring domain 1 SMARCA4 RNA polymerase IIA 220 kd subunit Surfeit 5 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1	Direct Direct Direct Direct Direct Direct Complex Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
	Vitamin D receptor interacting protein (*) Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Cyclin C	Complex
	Cyclin dependent kinase 8 Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Trf proximal protein Mediator of RNA polymerase II transcription, subunit 31 homologue Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Thyroid hormone receptor associated protein 6 SRB7 TRAP100 (*) TRAP95 CRSP9 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue Transcriptional coactivator CRSP70 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 CRSP9 (*) Mediator complex subunit 28	Complex
	Surfeit 5	Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Similar to HSPC296	
	MED9	
	CRSP9 (*)	
	Mediator complex subunit 28	
	TRAP230 (*)	
	TRAP220 (*)	
	Cyclin C	
	Cyclin dependent kinase 8	
	Mediator of RNA polymerase II transcription subunit 19	
	RNA polymerase II transcriptional regulation mediator (*)	
	Mediator of RNA polymerase II transcription subunit 8 (*)	
	MED18	
	Trf proximal protein	
	MED9	
	Intersex like	
	Thyroid hormone receptor associated protein 6	
	Mediator of RNA polymerase II transcription subunit 8 (*)	Complex
	Intersex like	
	TRAP100 (*)	Complex
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	Transcriptional coactivator CRSP70 (*)	
	RNA polymerase II transcriptional regulation mediator (*)	
	SRB7	
	SRB7	
	TRAP220 (*)	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Positive cofactor 2 glutamine	
	Mediator of RNA polymerase II transcription, subunit 31 homologue	
	CRSP2 (*)	Complex
	Vitamin D receptor interacting protein (*)	
	RNA polymerase II transcriptional regulation mediator (*)	
	TRAP95	
	Transcriptional coactivator CRSP130 (*)	
	TRAP100 (*)	
	Trf proximal protein	
	Thyroid hormone receptor associated protein 6	
	SRB7	
	PC2	
	CRSP4	
	CRSP5	
	CRSP2 (*)	
	TRAP220 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Transcriptional coactivator CRSP70 (*)	
	Transcriptional coactivator CRSP34 (*)	
	CRSP9 (*)	
CRSP7	Cyclin dependent kinase 8	Direct
	TRAP230 (*)	Direct
	Mediator of RNA polymerase II transcription subunit 8 (*)	Direct
	Retinol binding protein 1	Direct
	MED9	Direct
	Surfeit 5	Direct
	TRAP230 (*)	Complex
	TRAP220 (*)	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Positive cofactor 2 glutamine	
	TRAP100 (*)	
	Cyclin dependent kinase 8	
	Cell division cycle 2 like 1	
	Vitamin D receptor interacting protein (*)	
	Mediator of RNA polymerase II transcription subunit 19	
	RNA polymerase II transcriptional regulation mediator (*)	
	Mediator of RNA polymerase II transcription subunit 8 (*)	
	MED18	
	Trf proximal protein	
	MED9	
	TRAP95	

Table S3 Continued

Gene name	Interactors	Type of interaction
<i>RBBP4</i>	Mediator complex subunit 28	Complex
	THRAP2	
	Thyroid hormone receptor associated protein 1	
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	TRAP 80 (*)	
	CRSP9 (*)	
	MED9	
	Intersex like	
	Thyroid hormone receptor associated protein 6	
	Mediator complex subunit 28	
	Similar to HSPC296	
	Mediator of RNA polymerase II transcription, subunit 31 homologue	
	SRB7	
	Mediator complex subunit 28	
	Thyroid hormone receptor associated protein 1	
	TRAP230 (*)	
	TRAP220 (*)	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	
	TRAP100 (*)	
	TRAP95	
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	TRAP 80 (*)	
	Vitamin D receptor interacting protein (*)	
	RNA polymerase II transcriptional regulation mediator (*)	
	SRB7	
	CRSP9 (*)	
	Mediator complex subunit 28	
	MED9	
	Intersex like	
	Mediator of RNA polymerase II transcription subunit 19	
	TRAP100 (*)	
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	TRAP 80 (*)	
	RNA polymerase II transcriptional regulation mediator (*)	
	SRB7	Complex
	SRB7	
	TRAP220 (*)	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Positive cofactor 2 glutamine	
	CRSP4	
	CRSP5	
	CRSP2	
	TRAP 80 (*)	
	TRAP220 (*)	Complex
	Transcriptional coactivator CRSP130 (*)	
	Transcriptional coactivator CRSP34 (*)	
	CRSP9 (*)	
	BRCA1	
	CREBBP	
	Chromatin assembly factor 1 subunit B	
	Histone H3 K9 methyltransferase 1	
	Histone deacetylase 1	
	Inhibitor of growth 1	
	Retinoblastoma 1	Direct
	Retinoblastoma binding protein 7	
	Transcription factor Sp1	
	Transcription factor Sp3	
	Sin3 associated polypeptide ,30KD	
	Metastasis associated protein MTA1	
	Methyl CpG binding domain protein 2	
	Methyl CpG binding domain protein 3	
	Histone deacetylase 2	
	Breast cancer metastasis suppressor 1	
	Retinol binding protein 1	Direct
	Metastasis associated protein MTA2	
	Histone deacetylase 3	
	SIN3A	

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Hypothetical protein MGC4677	Direct
	AE binding protein 2	Direct
	Breast cancer metastasis suppressor 1 like	Direct
	Histone deacetylase 4	Direct
	H2A histone family member Q	Direct
	Histone 2 H3c	Direct
	SHARP	Direct
	CD8 Antigen, alpha polypeptide	Direct
	Histone deacetylase 1	Complex
	Eukaryotic translation initiation factor 3, subunit 10	
	Retinoblastoma binding protein 7	
	Chromodomain helicase DNA binding protein 4	
	Sin3 associated polypeptide ,30KD	
	Methyl CpG binding domain protein 2	
	Methyl CpG binding domain protein 3	
	Histone deacetylase 2	
	Metastasis associated protein MTA2	
	SIN3A	
	EZH2 protein	Complex
	Polycomb protein SUZ12	
	EED	
	AE binding protein 2	
	Histone deacetylase 1	
	Retinoblastoma binding protein 7	Complex
	Metastasis associated protein MTA1	
	Histone deacetylase 2	
	Metastasis associated protein MTA2	
	Methyl-CpG binding domain protein 3-like 1	
	Histone deacetylase 1	
	Inhibitor of growth 1	Complex
	Sin3 associated polypeptide ,30KD	
	Retinol binding protein 1	
	SIN3A	
	Histone deacetylase 1	
	Retinoblastoma binding protein 7	
	Sin3 associated polypeptide, 18 kd	
	Sin3 associated polypeptide ,30KD	
	Histone deacetylase 2	
	Histone deacetylase 1	
	Retinoblastoma binding protein 7	
	Methyl CpG binding domain protein 3	
	Histone deacetylase 2	
	Metastasis associated protein MTA2	
	Chromodomain helicase DNA binding protein 3	
	Metastasis associated protein MTA3	
	Polycomb protein SUZ12	
	EED	
	Chromatin assembly factor 1 subunit B	
	Chromatin assembly factor 1 subunit A	
	Sin3 associated polypeptide ,30KD	
	SIN3A	
	Histone deacetylase 2	
	Histone deacetylase 1	
	Nuclear receptor corepressor 2	
	Histone deacetylase 3	
	Nuclear receptor corepressor 1	
	mSDS3	
	Histone deacetylase 1	
	Retinoblastoma binding protein 7	
	Sin3 associated polypeptide ,30KD	
	Histone deacetylase 2	
	SIN3A	
	RBP1 like protein	
	mSin3A-associated protein 130	
	Sds3	
	Set1	
	Heat shock 70 KD protein 1A	
	HSP90A	
	Host cell factor C1	

Table S3 Continued

Gene name	Interactors	Type of interaction
<i>RUVBL2</i>	Histone deacetylase 1 Retinoblastoma binding protein 7 Sin3 associated polypeptide ,30KD ASH2 like Histone deacetylase 2 Heat shock 70 kDa protein 8 SIN3A SIN3B WD repeat domain 5 Activating transcription factor 2 BAF53 Proliferating cell nuclear antigen RuvB like 1 (*) RuvB like 2 (*) Catenin beta Exosome component 10 Bcl 3 Histone deacetylase 1 Histone deacetylase 4 Mortality factor 4 like protein 1 Sarcoma antigen NY-SAR-91 Inhibitor of growth family member 3 EPC1 Enhancer of polycomb homologue 2 HIV-1 Tat interacting protein, 60kDa Actin beta HIV-1 Tat interacting protein, 60kDa Glioma amplified sequence 41 Bromodomain containing 8 350/400 kDa PCAF associated factor Actin-like 6A DMAP1 RuvB like 1 (*) E1A binding protein p400 HIV-1 Tat interacting protein, 60kDa Actin beta Mortality factor 4 like 2 HIV-1 Tat interacting protein, 60kDa Inhibitor of growth family member 3 Glioma amplified sequence 41 Bromodomain containing 8 350/400 kDa PCAF associated factor Actin-like 6A DMAP1 E1A binding protein p400 Mortality factor 4 like protein 1 Sarcoma antigen NY-SAR-91 EPC1 Heat shock 70 KD protein 1A Ribosomal L1 domain containing 1 C20orf20 protein RuvB like 1 (*) HIV-1 Tat interacting protein, 60kDa 350/400 kDa PCAF associated factor Bromodomain containing 8 E1A binding protein p400 EPC1 Enhancer of polycomb homologue 2 HIV-1 Tat interacting protein, 60kDa Inhibitor of growth family member 3 Mortality factor 4 like protein 1 Mortality factor 4 like 2 C20orf20 protein Sarcoma antigen NY-SAR-91 DMAP1 RuvB like 1 (*) Glioma amplified sequence 41 Actin-like 6A TCFL1	Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Complex Complex Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	RNA polymerase II subunit 5-mediating protein RuvB like 1 (*) BCR downstream signaling 1 S phase kinase associated protein 2 NHP2 like protein 1 Nucleolar protein NOP5 Fibrillarin NHP2 like protein 1 NOP56 RuvB like 1 (*) RNA	Complex
<i>EAF1</i>	Elongation factor, RNA polymerase II, 2 RNA polymerase II elongation factor ELL	Direct Direct
<i>MED4</i>	MED9 Surfeit 5 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1 Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7 Thyroid hormone receptor associated protein 1	Direct Complex
	TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Cyclin C Cyclin dependent kinase 8 RNA polymerase II transcriptional regulation mediator (*) Trf proximal protein Mediator of RNA polymerase II transcription, subunit 31 homologue TRAP 80 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1	Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
	TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Thyroid hormone receptor associated protein 6 SRB7 TRAP100 (*) TRAP95 CRSP9 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1	Complex
	TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 CRSP9 (*) Mediator complex subunit 28	Complex
	CRSP2 (*) TRAP95 RNA polymerase II transcriptional regulation mediator (*) MED18 Trf proximal protein SRB7 Mediator of RNA polymerase II transcription, subunit 31 homologue CRSP2 (*) RNA polymerase II transcriptional regulation mediator (*) TRAP95 TRAP 80 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 PC2	Complex
CRSP8	Mediator of RNA polymerase II transcription subunit 19 Surfeit 5 Thyroid hormone receptor associated protein 6 Mediator of RNA polymerase II transcription subunit 8 (*) MED9 CRSP4 CRSP5 CRSP2 (*) TRAP 80 (*) TRAP220 (*) Transcriptional coactivator CRSP130 (*) Transcriptional coactivator CRSP70 (*) CRSP9 (*) Mediator of RNA polymerase II transcription subunit 8 (*)	Direct Direct Direct Direct Direct Direct Complex
CRSP9	MED9 Mediator complex subunit 28 Surfeit 5 Similar to HSPC296 MED9 Mediator complex subunit 28 TRAP230 (*) TRAP220 (*) TRAP 80 (*) Cyclin C Cyclin dependent kinase 8 Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*)	Direct Direct Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
MED18		
Trf proximal protein		
MED9		
Intersex like		
Thyroid hormone receptor associated protein 6		
Surfeit 5		
TRAP230 (*)		
TRAP220 (*)		
CRSP2 (*)		
Transcriptional coactivator CRSP130 (*)		
Positive cofactor 2 glutamine		
TRAP100 (*)		
Transcriptional coactivator CRSP70 (*)		
Cyclin dependent kinase 8		
Cell division cycle 2 like 1		
Vitamin D receptor interacting protein (*)		
Mediator of RNA polymerase II transcription subunit 19		
RNA polymerase II transcriptional regulation mediator (*)		
Mediator of RNA polymerase II transcription subunit 8 (*)		
MED18		
Trf proximal protein		
MED9		
TRAP95		
Mediator complex subunit 28		
THRAP2		
Thyroid hormone receptor associated protein 1		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80 (*)		
MED9		
Intersex like		
Thyroid hormone receptor associated protein 6		
Mediator complex subunit 28		
Similar to HSPC296		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
SRB7		
Thyroid hormone receptor associated protein 1		
TRAP230 (*)		
TRAP220 (*)		
CRSP2 (*)		
Transcriptional coactivator CRSP130 (*)		
Positive cofactor 2 glutamine		
TRAP100 (*)		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80 (*)		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
Mediator of RNA polymerase II transcription subunit 8 (*)		
Trf proximal protein		
Thyroid hormone receptor associated protein 6		
SRB7		
Mediator complex subunit 28		
Cyclin C		
Cyclin dependent kinase 8		
Vitamin D receptor interacting protein (*)		
RNA polymerase II transcriptional regulation mediator (*)		
Trf proximal protein		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
TRAP 80 (*)		
Mediator complex subunit 28		
Thyroid hormone receptor associated protein 1		
TRAP230 (*)		
TRAP220 (*)		
CRSP2 (*)		
Transcriptional coactivator CRSP130 (*)		
Thyroid hormone receptor associated protein 6		
SRB7		
TRAP100 (*)		
TRAP95		
Mediator complex subunit 28		
		Complex
		Complex
		Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
	Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) SRB7 CRSP4 CRSP5 CRSP2 TRAP 80 (*) TRAP220 (*) Transcriptional coactivator CRSP130 (*) Transcriptional coactivator CRSP70 (*) Transcriptional coactivator CRSP34 (*) ADP ribosyl transferase Retinoic acid receptor alpha SMAD1 SMAD2 Mediator of RNA polymerase II transcription subunit 8 (*) Mediator of RNA polymerase II transcription subunit 25 homologue MED9 Surfeit 5 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1 Vitamin D receptor interacting protein (*) Mediator of RNA polymerase II transcription subunit 19 Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Vitamin D receptor interacting protein (*) Mediator of RNA polymerase II transcription subunit 8 (*)	Complex
MED 6		Direct Direct Direct Direct Direct Direct Direct Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Cyclin C Cyclin dependent kinase 8 Vitamin D receptor interacting protein (*) Trf proximal protein Mediator of RNA polymerase II transcription, subunit 31 homologue TRAP 80 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Thyroid hormone receptor associated protein 6 SRB7 TRAP100 (*) TRAP95 CRSP9 (*) Cyclin C CRSP2 (*) Cyclin dependent kinase 8 TRAP220 (*) TRAP100 (*) SRB7 Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) TRAP95 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Transcriptional coactivator CRSP70 (*) Vitamin D receptor interacting protein (*) SRB7 CRSP9 (*) Mediator complex subunit 28 Surfeit 5 Similar to HSPC296 MED9 CRSP9 (*) Mediator complex subunit 28 TRAP230 (*) TRAP220 (*) TRAP 80 (*) Cyclin C Cyclin dependent kinase 8 Mediator of RNA polymerase II transcription subunit 19 Mediator of RNA polymerase II transcription subunit 8 (*) MED18 Trf proximal protein MED9 Intersex like Thyroid hormone receptor associated protein 6 CRSP2 (*) Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine Mediator of RNA polymerase II transcription subunit 25 homologue Acyl-coenzyme A dehydrogenase 8 Actin related protein 2/3 complex subunit 2, 34kDa	Complex
		Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Mediator of RNA polymerase II transcription subunit 8 (*)	
	CRSP2 (*)	Complex
	Cyclin dependent kinase 8	
	Cyclin C	
	SRB7	
	SRB7	Complex
	Cyclin dependent kinase 8	
	Cyclin C	
	TRAP100 (*)	Complex
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	TRAP 80 (*)	
	Transcriptional coactivator CRSP70 (*)	
	SRB7	
	SRB7	
	TRAP220 (*)	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	
	Positive cofactor 2 glutamine	
	Mediator complex subunit 28	
	CRSP2 (*)	Complex
	TRAP95	
	Vitamin D receptor interacting protein (*)	
	MED18	
	Trf proximal protein	
	SRB7	
	Mediator of RNA polymerase II transcription, subunit 31 homologue	
	CRSP2 (*)	Complex
	Vitamin D receptor interacting protein (*)	
	TRAP95	
	TRAP 80 (*)	
	Transcriptional coactivator CRSP130 (*)	
	TRAP100 (*)	
	Trf proximal protein	
	Thyroid hormone receptor associated protein 6	
	SRB7	
	PC2	
	TRAP220 (*)	Complex
	Mediator of RNA polymerase II transcription subunit 25 homologue	
	Cyclin dependent kinase 8	
	Intersex like	
	Thyroid hormone receptor alpha	
	Mediator of RNA polymerase II transcription subunit 8 (*)	
MED8	CRSP9 (*)	Direct
	Cyclin C	Direct
	Cyclin dependent kinase 8	Direct
	RNA polymerase II transcriptional regulation mediator (*)	Direct
	Surfeit 5	Direct
	TRAP 80 (*)	Direct
	TRAP220 (*)	Direct
	TRAP230 (*)	Direct
	Transcription elongation factor B, 1	Direct
	Transcriptional coactivator CRSP34 (*)	Direct
	Transcriptional coactivator CRSP70 (*)	Direct
	Ubiquitin specific protease 49	Direct
	Thyroid hormone receptor associated protein 6	Direct
	Mediator of RNA polymerase II transcription subunit 25 homologue	Direct
	Mediator complex subunit 28	Direct
	Mediator of RNA polymerase II transcription, subunit 31 homologue	Direct
	MED9	Direct
	Similar to HSPC296	Direct
	Trf proximal protein	Direct
	Mediator of RNA polymerase II transcription subunit 19	Direct
	Ngg1 interacting factor 3 like 1 binding protein 1	Direct
	Mediator of RNA polymerase II transcription subunit 8 (*)	Direct
	Surfeit 5	Direct
	TRAP230 (*)	Complex
	TRAP220 (*)	
	CRSP2 (*)	
	Transcriptional coactivator CRSP130 (*)	

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1 Vitamin D receptor interacting protein (*) Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) MED18 Trf proximal protein MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue SRB7 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Trf proximal protein Thyroid hormone receptor associated protein 6 SRB7 CRSP9 (*) Mediator complex subunit 28 Mediator complex subunit 28	Complex
	Surfeit 5 Similar to HSPC296 MED9 CRSP9 (*) Mediator complex subunit 28 TRAP230 (*) TRAP220 (*) TRAP 80 (*) Cyclin C Cyclin dependent kinase 8 Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) MED18 Trf proximal protein MED9 Intersex like Thyroid hormone receptor associated protein 6 CRSP2 (*) Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine Mediator of RNA polymerase II transcription subunit 25 homologue Acyl-coenzyme A dehydrogenase 8 Actin related protein 2/3 complex subunit 2, 34kDa RNA polymerase II transcriptional regulation mediator (*)	Complex
		Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
	Transcription elongation factor B, 2 Transcription elongation factor B, 1 Cullin 2 Ring-box 1 TRAP 80 (*) Intersex like RNA polymerase II transcriptional regulation mediator (*) Intersex like Thyroid hormone receptor alpha	Complex
	Mediator of RNA polymerase II transcription subunit 8 MED18 Intersex like Surfeit 5 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Transcriptional coactivator CRSP70 (*) Cyclin dependent kinase 8 Cell division cycle 2 like 1 Vitamin D receptor interacting protein Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*)	Complex
	MED18 MED9 TRAP95 Mediator complex subunit 28 THRAP2 Thyroid hormone receptor associated protein 1 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) CRSP9 (*) MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 Similar to HSPC296 Mediator of RNA polymerase II transcription, subunit 31 homologue	Complex
	SRB Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*) Positive cofactor 2 glutamine TRAP100 (*) Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) Thyroid hormone receptor associated protein 6 SRB CRSP9 (*) Mediator complex subunit 28 Cyclin C	Complex
	Cyclin dependent kinase 8 Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription, subunit 31 homologue TRAP 80 (*) Mediator complex subunit 28 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 (*) CRSP2 (*) Transcriptional coactivator CRSP130 (*)	Complex
<i>TRFP</i>		

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Thyroid hormone receptor associated protein 6 SRB7 TRAP100 (*) TRAP95 CRSP9 (*) Mediator complex subunit 28 Surfeit 5 Similar to HSPC296 MED9 CRSP9 Mediator complex subunit 28 TRAP230 (*) TRAP220 (*) TRAP 80 (*) Cyclin C Cyclin dependent kinase 8 Mediator of RNA polymerase II transcription subunit 19 RNA polymerase II transcriptional regulation mediator (*) Mediator of RNA polymerase II transcription subunit 8 (*) MED18 MED9 Intersex like Thyroid hormone receptor associated protein 6 Mediator complex subunit 28 CRSP2 (*) TRAP95 Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) MED18 SRB7 Mediator of RNA polymerase II transcription, subunit 31 homologue CRSP2 (*) Vitamin D receptor interacting protein (*) RNA polymerase II transcriptional regulation mediator (*) TRAP95 TRAP 80 (*) Transcriptional coactivator CRSP130 (*) TRAP100 (*) Thyroid hormone receptor associated protein 6 SRB7 PC2 BRCA1 Basic transcription factor 3 Cyclin dependent kinase 8 RNA polymerase IIA 220 kd subunit TRK fused gene Transcription elongation factor B, 3 Cyclin dependent kinase 9 RNA polymerase IIA 220 kd subunit SMARCC1 SMARCB1 SMARCA2 SMARCC2 Cyclin C Cyclin dependent kinase 8 SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 1 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 CRSP2 Transcriptional coactivator CRSP130 Positive cofactor 2 glutamine TRAP100 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 Vitamin D receptor interacting protein RNA polymerase II transcriptional regulation mediator Mediator of RNA polymerase II transcription subunit 8 Trf proximal protein Thyroid hormone receptor associated protein 6	Complex
SURB7		Direct Direct Direct Direct Direct Direct Direct Direct Complex
	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 1 Thyroid hormone receptor associated protein 1 TRAP230 (*) TRAP220 CRSP2 Transcriptional coactivator CRSP130 Positive cofactor 2 glutamine TRAP100 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 Vitamin D receptor interacting protein RNA polymerase II transcriptional regulation mediator Mediator of RNA polymerase II transcription subunit 8 Trf proximal protein Thyroid hormone receptor associated protein 6	Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
CRSP9		
Mediator complex subunit 28		
Cyclin C		Complex
CRSP2		
RNA polymerase II transcriptional regulation mediator		
Cyclin dependent kinase 8		
TRAP220		
TRAP100		
Cyclin C		Complex
Cyclin dependent kinase 8		
Vitamin D receptor interacting protein		
RNA polymerase II transcriptional regulation mediator		
Trf proximal protein		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
TRAP 80		
Mediator complex subunit 28		
Thyroid hormone receptor associated protein 1		
TRAP230		
TRAP220		
CRSP2		
Transcriptional coactivator CRSP130		
Thyroid hormone receptor associated protein 6		
TRAP100		
TRAP95		
CRSP9		
Mediator complex subunit 28		Complex
Thyroid hormone receptor associated protein 1		
TRAP230		
TRAP220		
CRSP2		
Transcriptional coactivator CRSP130		
TRAP100		
TRAP95		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80		
Transcriptional coactivator CRSP70		
Vitamin D receptor interacting protein		
RNA polymerase II transcriptional regulation mediator		
CRSP9		
Surfeit 5		Complex
TRAP230		
TRAP220		
CRSP2		
Transcriptional coactivator CRSP130		
Positive cofactor 2 glutamine		
TRAP100		
Transcriptional coactivator CRSP70		
Cyclin dependent kinase 8		
Cell division cycle 2 like 1		
Vitamin D receptor interacting protein		
Mediator of RNA polymerase II transcription subunit 19		
RNA polymerase II transcriptional regulation mediator		
Mediator of RNA polymerase II transcription subunit 8		
MED18		
Trf proximal protein		
MED9		
TRAP95		
Mediator complex subunit 28		
THRAP2		
Thyroid hormone receptor associated protein 1		
Mediator of RNA polymerase II transcription subunit 25 homologue		
TRAP 80		
CRSP9		
MED9		
Intersex like		
Thyroid hormone receptor associated protein 6		
Mediator complex subunit 28		
Similar to HSPC296		
Mediator of RNA polymerase II transcription, subunit 31 homologue		
CRSP2		Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	RNA polymerase II transcriptional regulation mediator Cyclin dependent kinase 8 Cyclin C RNA polymerase II transcriptional regulation mediator Cyclin dependent kinase 8 Cyclin C TRAP100 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 Transcriptional coactivator CRSP70 RNA polymerase II transcriptional regulation mediator TRAP220 CRSP2 Transcriptional coactivator CRSP130 Positive cofactor 2 glutamine Mediator complex subunit 28 CRSP2 TRAP95 Vitamin D receptor interacting protein RNA polymerase II transcriptional regulation mediator MED18 Trf proximal protein Mediator of RNA polymerase II transcription, subunit 31 homologue CRSP2 Vitamin D receptor interacting protein RNA polymerase II transcriptional regulation mediator TRAP95 TRAP 80 Transcriptional coactivator CRSP130 TRAP100 Trf proximal protein Thyroid hormone receptor associated protein 6 PC2 TRAP100 Mediator of RNA polymerase II transcription subunit 25 homologue TRAP 80 Transcriptional coactivator CRSP70 RNA polymerase II transcriptional regulation mediator TRAP220 CRSP2 Transcriptional coactivator CRSP130 Positive cofactor 2 glutamine None	Complex
	None	Complex
<i>ELL3</i>	Transcription factor IIIE, alpha subunit	Direct
<i>TCEA1</i>	CTD phosphatase, subunit 1	Direct
	CBF1 interacting corepressor	Direct
	RNA polymerase IIA 220 kd subunit	Direct
	EAF2	Direct
	Elongin A binding protein 1	Direct
DNA-directed RNA polymerase protein	Hypothetical protein FLJ10006	Direct
<i>POLR2A</i>	ABL	Direct
	ATP-dependent RNA helicase A	Direct
	Actin beta	Direct
	BAF53	Direct
	BRCA1	Direct
	BRCA1 associated ring domain 1	Direct
	CREBBP	Direct
	CTD phosphatase, subunit 1	Direct
	Caspase 10	Direct
	Cleavage and polyadenylation specificity factor 1	Direct
	Cleavage and polyadenylation specificity factor 2	Direct
	Cleavage and polyadenylation specificity factor 3	Direct
	CstF 50	Direct
	Cyclin dependent kinase 8	Direct
	EBNA2 coactivator p100	Direct
	ERCC6	Direct
	FUS	Direct
	Heterogenous nuclear ribonucleoprotein F	Direct
	Non pou domain containing octamer binding protein	Direct

Table S3 Continued

Gene name	Interactors	Type of interaction
	Pin1	Direct
	Polyglutamine binding protein 1	Direct
	Polymerase II, RNA, subunit F	Direct
	Polymerase II, RNA, subunit L	Direct
	RENT1	Direct
	RNA polymerase II elongation factor ELL	Direct
	RNA polymerase II subunit 3	Direct
	RNA polymerase II subunit D	Direct
	RNA polymerase II subunit G	Direct
	RNA polymerase IIA 25 kd subunit	Direct
	SUPT5H	Direct
	Scaffold Attachment Factor B	Direct
	Small CTD phosphatase 1	Direct
	Survival of motor neuron 1, telomeric	Direct
	TATSF1	Direct
	Transcription elongation factor A, 1	Direct
	Zinc finger protein 74	Direct
	Kallikrein 2	Direct
	ERCC5	Direct
	Transcription initiation factor IIB	Direct
	Cyclin K	Direct
	Cyclin L2	Direct
	Peptidyl prolyl isomerase G	Direct
	TAF10 RNA polymerase II TATA box binding protein TBP-associated factor 30 Kd	Direct
	XPA binding protein 2	Direct
	RNA polymerase II, polypeptide H	Direct
	MCM3 (*)	Direct
	OIP106	Direct
	SRB7	Direct
	Chorionic somatomammotropin hormone 2	Direct
	Translocation associated membrane protein 2	Direct
	Phosphorylated CTD interacting factor 1	Direct
	CDC2 related protein kinase 7	Direct
	Transcription elongation regulator 1	Direct
	Ku antigen, 80kDa	Direct
	Ccctc binding factor	Direct
	Cyclin dependent kinase 9	Direct
	BRCA1	Complex
	BRCA1 associated ring domain 1	
	SMARCA4	
	TRAP 80 (*)	Complex
	SMARCC1	
	SMARCB1	
	SMARCA2	
	SMARCC2	
	Cyclin C	
	SRB7	
	Cyclin dependent kinase 8	
	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 1	
	RING3	Complex
	Cyclin dependent kinase 8	
	TRAP220 (*)	
	NELFE	Complex
	SUPT5H	
	Wolf-Hirschhorn syndrome candidate 2	
	Nucleolin	Complex
	Cyclin T1	
	PPAR gamma coactivator 1	
	Cleavage and polyadenylation specificity factor 2	
	Cyclin dependent kinase 9	
	BRCA1	Complex
	BRCA1 associated ring domain 1	
	Human capping enzyme 1	Complex
	mRNA-cap:m7G methyltransferase	
	Thyroid hormone receptor interactor 15	Complex
	Ring-box 1	
	COP9, subunit 5	
	Cullin 4A	
	COP9,subunit 3	
	DNA excision repair protein ERCC-8	

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	COP9 signalosome subunit 4 Damage-specific DNA binding protein 1, 127kDa G protein pathway suppressor 1 COP9 constitutive photomorphogenic homologue subunit 6 COP9 constitutive photomorphogenic homologue subunit 7A COP9 constitutive photomorphogenic homologue subunit 8 RNA polymerase II subunit D RNA polymerase IIA 25 kd subunit Polymerase II, RNA, subunit F RNA polymerase II subunit G RNA polymerase II, polypeptide H Polymerase 2, RNA, subunit K Polymerase II, RNA, subunit L RNA polymerase II subunit J RNA polymerase II subunit I BRCA1 RNA polymerase II subunit 2 RNA polymerase II subunit 3 CSN4 CSN5 CSN7 Thyroid hormone receptor interactor 15 Ring-box 1 Cullin 4A COP9,subunit 3 DNA excision repair protein ERCC-8 Damage-specific DNA binding protein 1, 127kDa G protein pathway suppressor 1 COP9 constitutive photomorphogenic homologue subunit 6 COP9 constitutive photomorphogenic homologue subunit 8 Cullin 4A DNA excision repair protein ERCC-8 Casein kappa Damage-specific DNA binding protein 1, 127kDa COP9 constitutive photomorphogenic homologue subunit 6 COP9 constitutive photomorphogenic homologue subunit 8 Thyroid hormone receptor interactor 15 Ring-box 1 Chorionic somatomammotropin hormone 2 XPA binding protein 2 ATF4 Activating transcription factor 7 interacting protein Myogenic factor 4 Polymerase 2, RNA, subunit K Polymerase II, RNA, subunit L RNA polymerase II subunit D RNA polymerase II subunit G RNA polymerase IIA 25 kd subunit TAF15 RNA polymerase II subunit J RNA polymerase II, polypeptide H RNA polymerase II subunit 3 RNA polymerase II subunit 2 RNA polymerase IIA 220 kd subunit Polymerase ii, rna, subunit f RNA polymerase II associated protein 1 RNA polymerase II subunit 2 RNA polymerase II subunit D RNA polymerase IIA 25 kd subunit Polymerase II, RNA, subunit F RNA polymerase II subunit G RNA polymerase II, polypeptide H Polymerase 2, RNA, subunit K Polymerase II, RNA, subunit L RNA polymerase II subunit J RNA polymerase II subunit I BRCA1 RNA polymerase IIA 220 kd subunit RNA polymerase II subunit 2	Complex
<i>POLR2C</i>		Complex
		Direct
		Complex
		Complex
DNA-binding protein		

Table S3 Continued

Gene name	Interactors	Type of interaction
<i>MCM3</i>	Cyclin dependent kinase 2 MCM6 MCM7 Minichromosome maintenance protein 2 Origin recognition complex subunit 2 Polo like kinase RNA polymerase IIA 220 kd subunit MCM5 Minichromosome maintenance 3 associated protein ORC5 MCM4 Origin recognition complex, subunit 4 CDC45 Cell division cycle 7 Activator of S phase kinase Coiled-coil domain containing 5 RAD52 Minichromosome maintenance protein 10 CDC6 CDC5 Minichromosome maintenance protein 2 MCM7 MCM6 MCM5 Histone 3, H3 MCM4 BAF53 Catenin beta Plasminogen RuvB like 2 (*) C20orf20 protein HIV-1 Tat interacting protein, 60kDa Actin beta Mortality factor 4 like 2 HIV-1 Tat interacting protein, 60kDa Inhibitor of growth family member 3 Glioma amplified sequence 41 Bromodomain containing 8 350/400 kDa PCAF associated factor Actin-like 6A DMAP1 E1A binding protein p400 Mortality factor 4 like protein 1 Sarcoma antigen NY-SAR-91 EPC1 Heat shock 70 KD protein 1A Ribosomal L1 domain containing 1 C20orf20 protein RuvB like 2 (*) HIV-1 Tat interacting protein, 60kDa Actin beta Mortality factor 4 like 2 HIV-1 Tat interacting protein, 60kDa Inhibitor of growth family member 3 Glioma amplified sequence 41 Bromodomain containing 8 350/400 kDa PCAF associated factor Actin-like 6A DMAP1 E1A binding protein p400 Mortality factor 4 like protein 1 Sarcoma antigen NY-SAR-91 EPC1 Heat shock 70 KD protein 1A Ribosomal L1 domain containing 1 C20orf20 protein RuvB like 2 (*) Mortality factor 4 like protein 1 Sarcoma antigen NY-SAR-91 Inhibitor of growth family member 3	Direct Complex
<i>RUVBL1</i>		Direct Direct Direct Direct Direct Direct Direct Complex
		Complex
		Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	RuvB like 2 (*) EPC1 Enhancer of polycomb homologue 2 HIV-1 Tat interacting protein, 60kDa Actin beta HIV-1 Tat interacting protein, 60kDa Glioma amplified sequence 41 Bromodomain containing 8 350/400 kDa PCAF associated factor Actin-like 6A DMAP1 E1A binding protein p400 RNA polymerase II subunit 5-mediating protein RuvB like 2 (*) BCR downstream signaling 1 S phase kinase associated protein 2 NHP2 like protein 1 Nucleolar protein NOP5 RuvB like 2 (*) Fibrillarin NHP2 like protein 1 NOP56 RNA	Complex
RNA-binding protein <i>NCL</i>	Autoantigen La (*) Casein kinase II, alpha 1 Casein kinase II, alpha 2 DNA topoisomerase I Glucocorticoid receptor Granzyme A Midkine Nucleophosmin 1 Protein kinase C, zeta Telomere reverse transcriptase c-Myb p53 Fragile X mental retardation 1 protein Stauferin Calgizzarin PPAR gamma coactivator 1 Protein phosphatase 2C delta isoform Myb-related protein A CD3E Centaurin, alpha 1 Splicing factor arginine/serine rich 12 FXR1 FXR2 Cytoplasmic FMR1 interacting protein 1 Cyclin T1 PPAR gamma coactivator 1 Cleavage and polyadenylation specificity factor 2 RNA polymerase IIA 220 kd subunit Cyclin dependent kinase 9 TATSF1 Polymerase II, RNA, subunit F SUPT5H 60 kDa Ro protein Autoantigen La (*) GAJ/Bop1 NIFK NNP1 Ribosomal protein L3 Ribosomal protein L8 YTM1P Cell division cycle 2 like 2 Fibronectin 1 Ribosomal protein S3a Ribosomal protein L4 Ribosomal phosphoprotein large P0 DDX5	Direct Complex Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
	Ribosomal protein L7a Tubulin alpha 1 Peptidyl prolyl cis/trans isomerase nima interacting, 4 DDX1 Ribosomal protein S9 Ribosomal protein L21 Ribosomal protein L17 Ribosomal protein L6 Ribosomal protein L26 Ribosomal protein L7 P160 Growth arrest specific protein 8 Pescadillo homologue 1 C200RF1 protein DDX24 DDX21 GTP binding protein 4 NOP56 Ribosomal protein L10a Ribosomal protein S3 Nucleolar protein NOP5 Nucleophosmin 1 Switch associated protein 70 ADP ribosyl transferase None	
<i>PRPF31</i>		Complex
<i>SNRPD2</i>	EGF receptor Small nuclear ribonucleoprotein polypeptide D1 Survival of motor neuron 1, telomeric Small nuclear ribonucleoprotein polypeptide D2 Syntaxin binding protein 2 SMN interacting protein 1 Small nuclear ribonucleoprotein polypeptide F DDX20 Gemin 5 Gemin 6 LSM2 LSM6 Gemin 4 Survival of motor neuron 2, centromeric Syntaxin binding protein 3 Methylosome protein 50 HIV-1 Tat interacting protein, 60kDa Gemin 7 Small nuclear ribonucleoprotein polypeptide E Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide E YB-1 Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide D1 Small nuclear ribonucleoprotein polypeptide F Small nuclear ribonucleoprotein polypeptide G Splicing factor, arginine/serine-rich 7 Programmed cell death 7 Chromosome 16 open reading frame 33 Small nuclear ribonucleoprotein polypeptide E U2AF1L2 Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide D1 DDX15 Small nuclear ribonucleoprotein polypeptide F Small nuclear ribonucleoprotein polypeptide G Splicing factor 3B subunit 1 Pre mRNA branch site protein p14 Programmed cell death 7 U11/U12 snRNP 35K p175 CD69 antigen Small nuclear ribonucleoprotein polypeptide E Small nuclear ribonucleoprotein 70 kD CD2	Direct Complex Complex Complex Complex Complex Complex

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	Survival of motor neuron 1, telomeric Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide D1 U1 snRNP protein C Small nuclear ribonucleoprotein polypeptide F Small nuclear ribonucleoprotein polypeptide G WD repeat endosomal protein CCAP4 CCAP6 CCAP8 NMP200 SAP49 DNA topoisomerase II alpha Ribosomal protein S25 Ribosomal protein L12 Small nuclear ribonucleoprotein polypeptide A RBMX Splicing factor, arginine/serine rich 1 Splicing factor, arginine/serine rich 2 DNA dependent protein kinase catalytic subunit Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide D1 CDC5 Interleukin enhancer binding factor 2 Ribosomal protein S16 Protein phosphatase 2C delta isoform Ribosomal protein L13 Splicing factor 3 subunit 1 Spliceosome associated protein 145 Serine arginine repetitive matrix protein 1 Hypothetical protein HSPC148	Complex
	CCAP4 CCAP6 CCAP8 PRL1 PSF RNPG SAP49 SPF27 SRM160 DNA topoisomerase II alpha Ribosomal protein S25 Ribosomal protein L12 Small nuclear ribonucleoprotein polypeptide A RBMX Splicing factor, arginine/serine rich 1 Splicing factor, arginine/serine rich 2 DNA dependent protein kinase catalytic subunit Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide D1 CDC5 Interleukin enhancer binding factor 2 Ribosomal protein S16 Protein phosphatase 2C delta isoform Ribosomal protein L13 Splicing factor 3 subunit 1 Spliceosome associated protein 145 Serine arginine repetitive matrix protein 1 Nuclear matrix protein 200 Hypothetical protein HSPC148	Complex
	PUF60 SF3b10 SF3b125 SF3b14b SPF31 SR140 hPrp5p Heat shock 60 KD protein 1 Small nuclear ribonucleoprotein polypeptide E SNRPB	Complex

Table S3 Continued

Gene name	Interactors	Type of interaction
	U2AF35 U2AF65 Splicing factor, arginine/serine rich 1 Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide D1 DDX15 SMN related protein U2 small nuclear ribonucleoprotein B U2A prime Small nuclear ribonucleoprotein polypeptide F Small nuclear ribonucleoprotein polypeptide G High mobility group protein 20B Heat shock protein, 75 kDa Splicing factor, 45 kd CHERP PUF60 SF3b10 SF3b14b SPF31 SR140 hPrp5p Heat shock 60 KD protein 1 Small nuclear ribonucleoprotein polypeptide E SNRNP U2AF35 U2AF65 Splicing factor 3A, subunit 2 Splicing factor, arginine/serine rich 1 Small nuclear ribonucleoprotein polypeptide D3 Small nuclear ribonucleoprotein polypeptide D1 DDX15 SMN related protein U2 small nuclear ribonucleoprotein B U2A prime Small nuclear ribonucleoprotein polypeptide F Small nuclear ribonucleoprotein polypeptide G High mobility group protein 20B Heat shock protein, 75 kDa Splicing factor 3 subunit 1 Splicing factor, 45 kd Pre mRNA branch site protein p14 Spliceosome associated protein 145 Splicing factor 3A, subunit 3 Splicing factor 3B, subunit 3 Splicing factor 3B subunit 4 CHERP	Complex
Serine/threonine kinase protein Serine/threonine phosphatase protein <i>PPP2R1A</i>	Glutamate receptor ionotropic, N-methyl D-aspartate 1 Heat-shock transcription factor 2 NMDAR2D Protein phosphatase 2, regulatory subunit B (B56), alpha Protein phosphatase 2, regulatory subunit B', alpha Protein phosphatase 5 catalytic subunit Protein phostase 2A regulatory subunit,48kD Solute carrier family 6 (neurotransmitter transporter, noradrenalin), member 2 Importin 9 Guanine nucleotide binding protein, alpha 12 CDC42 Ubiquitin-specific protease 9 P160 Cytoplasmic FMR1 interacting protein 1 Ubiquitin specific protease 7 KIAA0802 Dedicator of cytokinesis 7 Rho guanine nucleotide exchange factor 2 Protein kinase C, iota type TGFB1 induced anti apoptotic factor 1 Hypothetical protein KIAA0889	Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Direct Complex

Table S3 **Continued**

Table S3 Continued

Gene name	Interactors	Type of interaction
	Tuberous sclerosis 1 gene	Direct
	Nuclear receptor corepressor 2	Direct
	Cell division cycle 2 like 1	Direct
	Heat shock 70 KD protein 1A	Complex
	HSP90A	
	14-3-3 zeta	
	14-3-3 Beta	
	Insulin receptor substrate 4	
	WD repeat domain 6	
	Mitogen-activated protein kinase kinase kinase 3	Complex
	14-3-3 zeta	
	14-3-3 Beta	
	14-3-3 Eta (*)	
	14-3-3 gamma	
	14-3-3 theta	
	p53 and DNA damage regulated 1	
	CDC37	
	Mortalin 2	
	HSPCAL3	
	HSP90B	
	EMK1	
	MAP2K5	
	Prefoldin 2	
	None	
SPIN	CDC 25B	Direct
YWHAQ	Calpain 3	Direct
	Follicle stimulating hormone receptor	Direct
	Heat shock 70 KD protein 1A	Direct
	NIF3L1	Direct
	14-3-3 theta	Direct
	B-Raf	Direct
	Fgr	Direct
	CBL	Direct
	6-phosphofructo-2 kinase/fructose-2,6-biphosphatase 2	Direct
	Telomere reverse transcriptase	Direct
	Tuberin	Direct
	BAX	Direct
	NFAT1	Direct
	Casein kinase 1, alpha 1	Direct
	Mycocyte specific enhancer factor 2D	Direct
	Cyclin dependent kinase inhibitor 1B	Direct
	Mtor	Direct
	Kinesin light chain 2 like	Direct
	Uncoupling protein 2	Direct
	Uncoupling protein 3	Direct
	SH3 domain binding protein 2	Direct
	Regulator of G protein signaling 3	Direct
	ASK1	Direct
	Regulator of G protein signaling 7	Direct
	Tubulin, alpha 2	Direct
	MAGOH	Direct
	Phosphatidylinositol 3-kinase, catalytic beta	Direct
	Ubiquitin specific protease 8	Direct
	BCL2 antagonist of cell death	Direct
	Icln-binding protein, 72 kd	Direct
	3 Phosphoinositide dependent protein kinase 1	Direct
	Protein kinase C, mu	Direct
	Lysosomal trafficking regulator	Direct
	Keratin 9	Direct
	DDX48	Direct
	Heat shock 70 kDa protein 8	Direct
	Kinesin family member 5B	Direct
	NFAT3	Direct
	Yes associated protein	Direct
	Phosphatidylinositol 4 kinase catalytic beta polypeptide	Direct
	Methylosome protein 50	Direct
	REM1	Direct
	Tuberous sclerosis 1 gene	Direct
	Calcineurin binding protein 1	Direct
	Cell division cycle 2 like 1	Direct

Table S3 Continued

Gene name	Interactors	Type of interaction
<i>AP3S1</i>	HS1 binding protein	Direct
	B-Raf	Complex
	RAP1 GTPase activating protein 1	Complex
	Mitogen-activated protein kinase kinase kinase 3	
	14-3-3 zeta	
	14-3-3 Beta	
	14-3-3 epsilon	
	14-3-3 Eta (*)	
	14-3-3 gamma	
	p53 and DNA damage regulated 1	
	CDC37	
	Mortalin 2	
	HSPCAL3	
	HSP90B	
	EMK1	
	MAP2K5	
	Prefoldin 2	
	IRS 1	Direct
	SCARB2	Direct
<i>Transmembrane receptor tyrosine kinase protein FGFR2</i>	Adaptor related protein complex 3, beta-2 subunit	Direct
	Clathrin adaptor complex AP3, sigma 3B subunit	Direct
	Solute carrier family 30, member 3	Direct
	Adaptin, delta	Direct
	Adaptin, delta	Direct
	Centaurin gamma 2	Complex
	Calcium channel voltage dependent, L type alpha 1D subunit	Direct
	Fibroblast growth factor 1	Direct
	Fibroblast growth factor 5	Direct
	Fibroblast growth factor 7	Direct
<i>Lipid kinase protein PIP5K2B</i>	Phospholipase C, gamma 1	Direct
	Fibroblast growth factor 2	Direct
	Integrin alpha 5	Direct
	Fibroblast growth factor receptor 2	Direct
	Fibroblast growth factor 9	Direct
	Fibroblast growth factor 10	Direct
	CBL	
	Lyn	
	Fyn	
		Complex
<i>PIP5K2C</i>	Tumour necrosis factor receptor 1	Direct
	Phosphatidylinositol-4-phosphate 5-kinase type II beta	Direct
<i>Heterotrimeric G-protein GTPase protein GNB4</i>	None	
	Guanine nucleotide binding protein, gamma 13	Direct
<i>Guanyl-nucleotide exchange factor protein ARHGEF4</i>	Guanine nucleotide binding protein, gamma 12	Direct
	APC	Direct
	RhoA	Direct
	Catenin beta	
<i>Calcium-binding protein (signal transduction) S100A8</i>	APC	Complex
	Neutrophil cytosolic factor 2	Direct
	S100 Calcium binding protein A9	Direct
	Carcinoembryonic antigen related cell adhesion molecule 3	Direct
	S100 Calcium binding protein A8	Direct
	S100 Calcium binding protein A8	Direct
	S100 Calcium binding protein A9	Direct
<i>Enzyme: dehydrogenase GAPDH</i>	Actin beta	Direct
	Amyloid beta A4 protein	Direct
	Calcyclin	Direct
	Solute carrier family,member 1	Direct
	Glyceraldehyde 3 phosphate dehydrogenase	Direct
	Huntingtin	Direct
	Diphosphoglycerate mutase	Direct
	Protein kinase C, iota type	Direct
	Phosphoglycerate kinase 1	Direct
	Androgen receptor	Direct

Table S3 Continued

Gene name	Interactors	Type of interaction
<i>MDH2</i>	Ataxin 1	Direct
	Dynein light chain 1	Direct
	Phospholipase D2	Direct
	Metabotropic glutamate receptor 1	Direct
	Protein disulfide isomerase A2	Direct
	HIV-1 Tat interacting protein, 60kDa	Direct
	SIAH-1	Direct
	Citrate synthase	Direct
	Fumarase	Direct
	Glutamate oxaloacetate transaminase, mitochondrial	Direct
Enzyme: synthase <i>PTS</i>	Malate dehydrogenase mitochondrial	Direct
	NADH ubiquinone oxidoreductase Fe-S protein 1	Direct
	Pyruvate carboxylase	Direct
Unknown <i>LSM14</i> <i>DRG1</i>	BRG1 associated factor,180 KD	Direct
	6 pyruvoyl tetrahydrobiopterin synthase	Direct
	Fibronectin type III domain containing 5	Direct
	Protein kinase cGMP dependent Type II	Direct
<i>HCCA2</i>	None	
	Leukemia lymphoid 1	Direct
	T cell acute lymphocytic leukemia 1	Direct
<i>C20orf11</i> <i>SMAD9</i>	Serine/threonine protein kinase 38	Direct
	NDRG family member 2	Direct
	None	
	Activin A receptor, type I	Direct
	BTG2	Direct
	Bullous pemphigoid antigen 1	Direct
	HEY1	Direct
	Leucyl cysteinyl aminopeptidase	Direct
	Ribosome binding protein 1	Direct
	Small nuclear ribonucleoprotein 70 kD	Direct
	Upstream regulatory element binding protein 1	Direct
	TOB1	Direct
	SMAD4	Direct
	SMAD, mothers against DPP homologue 2 (Drosophila)	Direct
	Low density lipoprotein receptor related protein 5	Direct
	MLL2	Direct
	Hypothetical protein FLJ32214	Direct
	Splicing factor 3B subunit 1	Direct
	Potential carboxypeptidase like protein X2	Direct
	Exophilin 5	Direct
	Regulatory factor X 1	Direct
	MAN antigen 1	Direct
	Zinc finger and SCAN domain containing 4	Direct
	E4F transcription factor 1	Direct
	Hypothetical protein KIAA0226	Direct
	SECIS binding protein 2	Direct
	Aryl hydrocarbon receptor nuclear translocator	Direct
	Chorionic somatomammotropin hormone 1	Direct
	Zinc finger protein 484	Direct
	Zinc finger protein 587	Direct
	Rho GTPase activating protein 9	Direct
	Plakophilin 2	Direct
	Proline glutamic acid leucine-rich protein 1	Direct
	Granulin	Direct
	Hypothetical protein FLJ10747	Direct
	ASH2 like	Direct
	Prosaposin	Direct
	KIAA0372	Direct
	N-acetylglucosamine kinase	Direct
	BiP associated protein	Direct
	TID 1	Direct
	Dickkopf 1	Direct
	Poly(A) binding protein 4	Direct
	Plectin 1	Direct
	Lipocalin 7	Direct
	Ubiquitously transcribed TPR protein on the X chromosome	Direct
	EIF3S8	Direct
	Protein phosphatase 2 regulatory subunit B (B56) epsilon	Direct

Table S3 **Continued**

Gene name	Interactors	Type of interaction
	KIAA0804	Direct
	RAN binding protein 9	Direct
	Hairy/enhancer-of-split related with YRPW motif-like	Direct
	SH2 domain binding protein 1	Direct
	MLLT2	Direct
	XPA binding protein 2	Direct
	TRIM29	Direct
	Minichromosome maintenance 3 associated protein	Direct
	Peroxisome proliferator activated receptor, delta	Direct
	EIF3S5	Direct
	Bromodomain adjacent to zinc finger domain 1A	Direct
	Zinc finger protein 592	Direct
	Hypothetical protein FLJ20313	Direct
	Mannosidase alpha class 1A member 2	Direct
	OTUBAIN 1	Direct
	FLJ10808 Protein	Direct
	Fibronectin 1	Direct
	LIM domain only 4	Direct
	Fodrin beta	Direct
	Ubiquilin 1	Direct
	Hypothetical protein FLJ13910	Direct
	Phosphorylase kinase liver alpha 2 subunit	Direct
	Dnaj homologue subfamily C member 7	Direct
	Tubulin specific chaperone D	Direct
	14-3-3 theta	Direct
	Ferritin light chain	Direct
	Patatin like phospholipase domain containing 2	Direct
	Cisplatin resistance associated	Direct
	PI3 kinase related kinase SMG1	Direct
	Ubiquitin protein ligase E3A	Direct
	DIAPH3	Direct
	Cytochrome P450, subfamily XIA	Direct
	SKD3	Direct
	Zinc finger protein 83	Direct
	MGAT1	Direct
	Adaptor related protein complex 2 alpha 1 subunit	Direct
	ASB2	Direct
	Alpha mannosidase B	Direct
	Smooth muscle cell associated protein 1	Direct
	Methyl CpG binding domain protein 1	Direct
	SMAD3	Direct
	Pregnancy associated plasma protein A	Direct
	Glutaminyl tRNA synthetase	Direct
	Ataxin 1 ubiquitin like interacting protein	Direct
	Chromosome 9 open reading frame 13	Direct
	Pirin	Direct
	Stromal antigen 1	Direct
	Centrosome protein 4	Direct
	Limbkin	Direct
	CXXC finger 5	Direct
	Thyroid hormone receptor interactor 12	Direct
	Actin beta	Direct
	Zinc finger protein 557	Direct
	Destrin (actin depolymerizing factor)	Direct
	ARID1B	Direct
	Mannosidase, alpha, class 1C, member 1	Direct
	Eukaryotic translation initiation factor 3, subunit 6 48kDa	Direct
	Chondroitin polymerizing factor	Direct
	Ring finger protein 123	Direct
	Elongation factor 1A binding protein	Direct
	Proteasome 26S subunit, non ATPase 8	Direct
	FLI1	Direct
	C10orf2 protein	Direct
	SMAD interacting protein 1	Direct
	Telomeric repeat binding factor NIMA-interacting 1	Direct

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