

Table S2. Comparison of the top 100 LSD1-dependent protein candidates associated with GF11B

Rank	GF11B-WT vs. GF11B-ΔSNAG		GF11B-WT vs. GF11B-P2A		SNAG vs. BirA* Only	
	Gene name	<i>P</i> value ^a	Gene name	<i>P</i> value ^a	Gene name	<i>P</i> value ^a
1	FERMT3	6.13E-22	ZNF451	3.22E-17	LSG1	9.06E-30
2	PRDM10	2.22E-15	RCOR3	4.40E-16	FAM83H	1.89E-26
3	ZNF451	1.34E-13	GSE1	5.28E-14	MARCKSL1	5.14E-13
4	RCOR3	2.28E-12	L3MBTL3	1.62E-13	PHF21A	6.01E-21
5	RCOR1	4.44E-12	RREB1	1.00E-12	RCOR3	7.48E-20
6	KDM1A (LSD1)	1.60E-11	ZNF622	1.98E-12	RREB1	2.20E-17
7	GSE1	6.06E-11	CUL4B	2.51E-12	KDM1A (LSD1)	3.68E-16
8	HMG20B	1.42E-10	PRDM2	2.84E-12	PRKCA	8.17E-16
9	RREB1	1.84E-10	CBX4	1.35E-11	AFTPH	1.70E-14
10	CBX4	2.37E-10	KDM1A (LSD1)	6.68E-11	RCOR1	1.12E-13
11	RAD54L2	3.46E-10	LARP1	7.48E-11	FASTKD1	5.37E-13
12	L3MBTL3	3.51E-10	GFM1	1.53E-10	AP3B1	7.61E-13
13	PTK2B	5.27E-10	SLX4	3.00E-10	NAP1L4	9.14E-13
14	P4HB	1.44E-09	SEPT7	3.73E-10	NAP1L1	2.89E-12
15	NUP188	1.11E-08	ZMYM2	6.66E-10	DNAJB12	4.40E-12
16	EIF2B5	1.73E-08	GIGYF2	1.13E-09	TSR1	7.75E-12
17	HIST1H1A	2.22E-08	SEC23B	3.10E-09	TMED9	2.09E-11
18	FAM83H	2.99E-08	ARVCF	3.85E-09	ROR2	2.61E-11
19	ZNF629	6.54E-08	RCOR1	4.77E-09	MAP2K7	1.12E-10
20	OSBPL3	9.68E-08	PRDM10	5.43E-09	IPO9	1.33E-09
21	ARVCF	1.45E-07	HMG20B	6.28E-09	NOL11	1.08E-08
22	HDAC2	1.58E-07	YARS	1.03E-08	HMG20B	1.51E-08
23	PRDM2	1.77E-07	PHF21A	1.13E-08	WDR43	2.01E-08
24	ZMYM2	2.97E-07	FAM208B	1.20E-08	PPP4R3A	4.59E-08
25	BUB1B	5.45E-07	ZNF609	1.78E-08	UBE2O	8.66E-08
26	HDAC1	5.53E-07	cDNA FLJ51764	4.26E-08	RRP7BP	1.12E-07
27	NCKAP1	6.44E-07	MED14	6.05E-08	CHTF18	1.30E-07
28	TARS2	6.78E-07	MAGEC1	7.59E-08	L3MBTL3	1.45E-07
29	HMG20A	1.28E-06	RAB3GAP1	1.39E-07	MTCH2	2.66E-07
30	EDC4	1.80E-06	NASP	3.22E-07	IPO7	4.73E-07
31	CBSL	1.88E-06	BRD8	9.26E-07	TNRC18	4.94E-07
32	NCOA1	2.34E-06	RAI1	9.74E-07	DDX27	8.64E-07
33	KDM5B	6.37E-06	PIAS2	1.60E-06	NOP14	1.01E-06
34	EHD4	6.58E-06	RSF1	2.66E-06	NOB1	1.61E-06
35	ZFPM1	8.87E-06	GPATCH1	7.60E-06	BYSL	1.62E-06

36	SMARCAL1	1.26E-05	NUP58	8.82E-06	UBE3C	1.83E-06
37	PHF21A	1.53E-05	KIF22	1.06E-05	GSE1	3.06E-06
38	SEC23B	1.75E-05	RUNX1	1.13E-05	PDAP1	4.41E-06
39	ATRX	3.32E-05	HMG20A	1.31E-05	RRP1B	4.42E-06
40	PEX1	4.92E-05	IQSEC1	1.64E-05	RPL15	5.68E-06
41	GRAP2	5.12E-05	MTF2	1.65E-05	PDCD11	1.09E-05
42	ABCB10	6.04E-05	HDAC3	2.74E-05	BUD13	1.40E-05
43	HBZ	6.73E-05	HDAC1	3.06E-05	MRPS27	1.59E-05
44	AMBRA1	6.91E-05	TRIM41	3.10E-05	RRBP1	1.62E-05
45	ANKHD1	9.12E-05	SETD2	3.70E-05	MARS	1.87E-05
46	STAT5B	1.03E-04	TUBB1	4.52E-05	PRDM2	1.92E-05
47	JMJD1C	1.18E-04	PTK2B	4.54E-05	IGF2BP2	3.99E-05
48	CHD9	1.57E-04	WRN	6.36E-05	PGM2	5.05E-05
49	SLX4	2.72E-04	ATRX	8.12E-05	FDPS	6.59E-05
50	MAP1B	2.73E-04	PIAS1	1.17E-04	OPA1	7.06E-05
51	PRR12	3.06E-04	KPNA5	1.33E-04	MYBBP1A	7.87E-05
52	NCOR2	3.12E-04	ABCB10	1.69E-04	GF11B	8.21E-05
53	BCOR	3.84E-04	NCOR2	1.80E-04	FBRSL1	9.39E-05
54	SLC25A12	4.31E-04	RAD18	1.91E-04	CARM1	1.65E-04
55	ISYNA1	5.51E-04	ZMYND8	1.96E-04	HMG20A	1.70E-04
56	XRCC5	9.24E-04	ZNF384	2.35E-04	NEPRO	1.72E-04
57	PYGB	1.14E-03	PIGT	2.49E-04	COQ5	1.97E-04
58	FLII	1.29E-03	BCOR	2.59E-04	LENG8	2.05E-04
59	TBL1X	1.41E-03	ZFPM1	3.06E-04	ATN1	2.65E-04
60	OTUD4	1.46E-03	TRNAU1AP	3.35E-04	COMMD3	3.37E-04
61	ABCD3	1.52E-03	NR2C2	3.85E-04	LTV1	3.46E-04
62	VPS52	1.62E-03	CKAP5	3.91E-04	RRP12	4.01E-04
63	PIAS1	1.71E-03	SMARCAL1	3.95E-04	ORC1	4.56E-04
64	LARP4B	1.79E-03	CTR9	4.23E-04	FERMT3	4.92E-04
65	GALK2	1.98E-03	FUBP3	4.51E-04	PINX1	5.42E-04
66	RUNX1	2.08E-03	cDNA FLJ51028	4.60E-04	GTF2H2C	6.37E-04
67	UBAP2	2.13E-03	CNOT1	6.62E-04	ZNF701	7.84E-04
68	FECH	2.21E-03	SENPA6	6.64E-04	NUDT4	8.94E-04
69	PRRC2C	2.35E-03	TAF6L	7.46E-04	KDM5B	9.43E-04
70	EXOC3L2	2.86E-03	ZNF592	7.49E-04	RBFOX1	1.13E-03
71	ASNS	2.88E-03	VPS51	7.89E-04	SLC3A2	1.25E-03
72	AHDC1	2.92E-03	HBZ	8.00E-04	RPP40	1.28E-03
73	CARD6	2.97E-03	CBSL	8.05E-04	LIG3	1.42E-03
74	RICTOR	3.02E-03	PLCD1	9.81E-04	CCDC9	1.78E-03
75	YARS	3.04E-03	SDHA	1.19E-03	SLC2A1	1.99E-03

76	FHOD1	3.36E-03	KDM5B	1.21E-03	NOL6	2.24E-03
77	ZNF672	4.07E-03	SBNO1	1.48E-03	TBC1D14	2.27E-03
78	C16orf58	4.26E-03	TBL1X	1.56E-03	HNRNPH3	2.59E-03
79	HNRNPL	4.49E-03	ATXN2	1.75E-03	IMP4	2.71E-03
80	ALDH18A1	6.11E-03	TBL1XR1	1.79E-03	HIST1H1C	2.99E-03
81	GOLGA2	6.18E-03	RPA1	1.81E-03	MMS19	3.08E-03
82	PLCD1	6.31E-03	KIF5A	1.87E-03	NCOR2	3.19E-03
83	TXNIP	7.04E-03	DGCR14	2.10E-03	RPL7L1	3.39E-03
84	ALDH16A1	7.11E-03	TRMT2A	2.13E-03	BRMS1	3.41E-03
85	ATXN2	7.45E-03	ACACA	2.77E-03	DDX56	3.77E-03
86	PSMB5	7.79E-03	EXOC2	2.96E-03	KIF18A	3.79E-03
87	GFM1	8.53E-03	MSH3	3.04E-03	BAZ1B	4.47E-03
88	CNOT2	1.07E-02	NKTR	3.20E-03	CSPP1	4.54E-03
89	QSER1	1.07E-02	HAUS5	3.50E-03	CBFB	4.57E-03
90	DYRK1A	1.09E-02	DDX51	3.79E-03	SNAP23	4.96E-03
91	RANBP9	1.14E-02	CHD9	4.34E-03	H2AFV	5.23E-03
92	PPA2	1.18E-02	RNPC3	4.60E-03	BRAF	5.27E-03
93	QARS	1.19E-02	ZNF512B	5.33E-03	IQSEC1	5.37E-03
94	BIRC2	1.23E-02	SMG7	5.40E-03	ARAF	5.77E-03
95	SMG7	1.25E-02	BEND3	5.92E-03	EBNA1BP2	5.85E-03
96	CD3EAP	1.27E-02	ZKSCAN4	6.08E-03	USP36	6.04E-03
97	MTFR1L	1.36E-02	RCOR3	6.49E-03	PRR5	6.15E-03
98	UTP14C	1.41E-02	HSD17B10	6.54E-03	PHIP	6.71E-03
99	KDM2B	1.43E-02	HUWE1	6.59E-03	GTPBP4	6.94E-03
100	MAGEC1	1.50E-02	ALDH18A1	6.65E-03	MMTAG2	7.01E-03

^aDetermined by two tailed *t*-distribution of the z-score of the 20 neighboring ranked proteins.

Known BHC complex members in **RED**