

Table S1 List of RBP genes screened

<i>C. elegans</i> RBP	<i>Drosophila</i> RBP	BLASTP E value	Allele	Reference	RNAi
B0336.3	Swm	3.00E-16	<i>gk910</i>	UBC	III-3A15
B0511.6	Pit	1.00E-175	<i>ok2948</i>	UBC	This study
C25A1.4	Rump	1.00E-46	none		I-5G19
C30B5.4	CG10466	2.00E-48	<i>gk3082</i>	UBC	II-4J09
C44B7.2	Sm	3.00E-69	none		This study
C46F11.4	CG6418	0.00E+00	none		III-1H08
C56G2.1	Spoon/Yu	3.00E-30	<i>tm3447</i>	NBRP	
CGH-1	Gem3	6.00E-61	<i>ok492</i>	UBC	
CPB-3	Orb	7.00E-64	<i>bt17</i>	Hasegawa <i>et al.</i> 2006	
CYN-13	Cyp33	5.00E-124	none		This study
D1037.1	Loq	6.00E-09	<i>ok1746</i>	OMRF	
DDX-17	CG10777	5.00E-160	<i>tm3202</i>	NBRP	This study
DCR-1	Dcr-1	3.00E-124	<i>ok247</i>	OMRF	
DRSH-1	Drosha	0.00E+00	<i>ok369</i>	UBC	
ETR-1	Aret/Bru	9.00E-118	<i>tm6221</i>		II-1G15
EXC-7	Ssx	1.00E-47	<i>ok370</i>		
F13E9.1	CG5439	2.00E-08	<i>tm1886</i>	NBRP	
F26B1.2	Bl	2.00E-39	<i>tm5522</i>	NBRP	
F57B10.8	CG32706	3.00E-11	none		I-3M23
FUST-1	CG14718	2.00E-08	<i>tm4439</i>	NBRP	
HEL-1	Hel25E	0.00E+00	<i>ok3698</i>		II-6I01
HRPF-1	CG11726	8.00E-06	<i>tm3406</i>	NBRP	
K08F4.2	Rin	3.00E-10	none		IV-5G18
LARP-5	CG11505	8.00E-33	<i>gk939577/463873*</i>	Thompson <i>et al.</i> 2013	I-1H07

MBL-1	Mbl	5.00E-45	<i>tm1563</i>	NBRP	
MTR-4	L(2)35Df	0.00E+00	<i>ok2642</i>	OMRF	
NCL-1	Brat	2.00E-172	<i>e1942</i>	Frank & Roth 1998	
NOS-1	Nos	1.00E-07	<i>ok250</i>	OMRF	
PUF-9	Pum	6.00E-128	<i>ok1136</i>	UBC	
R05D11.4	CG5589	6.00E-112	none		I-4A04
R11A8.7	MASK	2.00E-154	<i>tm5136</i>	NBRP	
RNP-3	Snf	5.00E-70	<i>ok1424</i>	OMRF	
RPS-3	RpS3	6.00E-124	none		III-3C02
RSP-3	SF2	4.00E-59	<i>ok2927</i>	UBC	
RSP-6	X16	3.00E-22	<i>ok798</i>	UBC	
RSP-7	Srp54	8.00E-45	<i>ok2079</i>	UBC	II-7O08
SAP-49	CG11454	5.00E-10	none		II-5N14
SET-2	Set1	4.00E-68	<i>n4589</i>	Andersen & Horvitz 2007	
SQD-1	Sqd	3.00E-41	<i>ok1582</i>	UBC	
STAU-1	Stau	1.00E-42	<i>tm2266</i>	NBRP	
SUP-26	Shep	6.00E-52	<i>gk426</i>	UBC	
SYM-2	Glo	3.00E-32	<i>mn617</i>	Yochem <i>et al.</i> 2004	
T08B2.5	CG4887	2.00E-23	<i>gk721</i>	UBC	I-2P02
T28D6.4	Mib2	7.00E-23	<i>tm926</i>	NBRP	
TIAR-1	CG34354	1.00E-77	<i>tm361</i>	NBRP	
UAF-2	U2AF38	9.00E-90	<i>gk3159</i>	UBC	IV-8I21
W04D2.6	CG4119	8.00E-28	<i>tm2681</i>	NBRP	
WDFY-2	CG5168	2.00E-98	<i>tm3806</i>	NBRP	
Y23H5B.6	CG5800	1.00E-172	none		This study
Y55F3AM.3	CG11266	1.00E-97	<i>gk454899**</i>	Thompson <i>et al.</i> 2013	IV-8L05
Y55F3BR.1	Ddx1	0.00E+00	none		IV-1G20
ZC190.4	Smg	7.00E-17	none		This study

ZC434.3	CG9107	1.00E-11	none		This study
ZK686.2	Dbp73D	4.00E-59	<i>tm5978</i>	NBRP	

C. elegans RBPs are the best homologs of *Drosophila* RBPs reported by Olesnicky *et al.* (2014) by BLASTp search (E values are given). Sources of alleles are indicated above. Abbreviations: (NBRP) the Mitani Lab through the *C. elegans* National Bioresource Project of Japan; (UBC) *C. elegans* Reverse Genetics Core Facility at the University of British Columbia, (OMRF) *C. elegans* Reverse Genetics Core Facility at the Oklahoma Medical Research Foundation. UBC and OMRF are part of the international *C. elegans* Gene Knockout Consortium. RNAi clones (clone location given) are from the Ahringer library (Geneservice LTD; Fraser *et al.* 2000; Kamath *et al.* 2003) or were constructed for this study (plasmid construction described in Table S2).

**gk939577/gk463873* results in a conceptual translation of the first 436 amino acids unchanged followed by 3 missense changes and a stop codon. There are 308 codons after the stop. The LA domain and the LARP4/5-like domain are within the first 436 amino acids.

***gk454899* is a single missense change R251C in a residue conserved in flies, fish, and mammals. The residue does not fall within anRNA recognition motif (RRM) but falls in a region between two RRM.