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SUPPLEMENTARY MATERIAL

corresponding to:

Maternal RNAs encoding transcription factors for germline-specific gene expression in *Drosophila* embryos

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SUPPLEMENTARY TABLE 1

LIST OF PRIMERS

Gene Name Accession No. *	ID Length†	sequence#	position**
CG10445	CG10445-RA	5'-ATAAGCTTAGGTACAACGAGATCTACGAAAGATTC-3'	1939-1965
HM141494	2940 bp	5'-ATGGATCCCATCTCGAAGAGTTTCTTTAGCTCC-3'	2937-2913
HLHmbeta	CG14548-RA	5'-ATCTCGAGATGTCCAAGACCTATCAGTACCGC-3'	149-172
NM079781	1098 bp	5'-ATGAATTCACATGGGGCCAGAGGTGG-3'	704-687
Arc70	CG1793-RA	5'-ATAAGCTTAAATCGATTCTAGACTTGCGTCTGG-3'	3699-3723
NM143679	5073	5'-ATGGATCCTTCAAGCAAAACGTAAGGCAAAACAATTAAGG-3'	4697-4666
sd	CG8544-RB	5'-ATGGTACCTATCCGCCGTGCGGACG-3'	918-934
NM078614	3207 bp	5'-ATGAGCTCTTCCTTAATTAGACGGTATATGTGATGGG-3'	1916-1888
bip2	CG2009-RA	5'-ATGGTACCCAGATTGGCTTACCATCTTTCAAATCC-3'	3375-3401
NM143666	4515 bp	5'-ATGAGCTCCTTTTTCTTGTTTCGTCTCTTTTTTTTTTCAGAG-3'	4373-4340
ush	CG2762-RA	5'-ATGGTACCTGTCCACCACCCGTTGCG-3'	3146-3163
NM057432	4732 bp	5'-ATGAGCTCAATGGCCGCCTCCTGCAG-3'	4144-4127
EP2237	CG4427-RA	5'-ATGGTACCCAGAAAGCGGAAAGGGTTAGC-3'	1059-1079
NM164384	2044 bp	5'-ATGAGCTCTCGCTGCACTTGAAGCAGG-3'	2057-2039
HLHm5	CG6096-RA	5'-ATGGTACCCACCACAGAGCAACAACAGC-3'	88-107
NM079787	886 bp	5'-ATGAGCTCACATGGTTTCTTCGACTGGC-3'	606-587
peb	CG12212-RA	5'-ATGGTACCGAGCTGGAAAGGGAGCGC-3'	5200-5217
NM057326	6458 bp	5'-ATGAGCTCCTTGTTGTCCACACCCAGAAG-3'	6201-6181
ovo	CG6824-RA	5'-ATGGTACCTGATTACGCTGATATCCACGC-3'	3076-3096
NM080338	4710 bp	5'-ATGAGCTCATTGTGGACTGGCATGGG-3'	4094-4077
tll	CG1378-RA	5'-ATGGTACCCACATGGCCATGTACAAGG-3'	590-608
NM079857	1938 bp	5'-ATGAGCTCCGCTGACTGTACATGTCGG-3'	1581-1563
Rib	CG7230-RA	5'-ATGGTACCACCAGAACACCCAGCTTCC-3'	1629-1647
NM080534	3962 bp	5'-ATGAGCTCATCAGCTCCCTCTTCAGACC-3'	2646-2627
CG3136	CG3136-RC	5'-ATGGTACCCAAAAGTATCTCAACATACCAAATAACTTGGAA-3'	1359-1391
NM206023	2518 bp	5'-ATGAGCTCGTTGATAAACTTTGTTTCCTTATTAAAACTAGATGC-3'	2357-2322
emc	CG1007-RA	5'-ATGGTACCATGAAGTCCCTGACGGCC-3'	259-276
NM079152	2056 bp	5'-ATGAGCTCCGACTGTCTGCTGTCTTTCTC-3'	855-835
Doc1	CG5133-RA	5'-ATAAGCTTGTGGAGGCCAAGTTGGAG-3'	338-355
NM140026	1526 bp	5'-ATGGATCCATAGGCCAAAATGGCTGAAATGCTG-3'	1336-1312
Tif-IA	CG3278-RA	5'-ATAAGCTTTCTGTGAG TCATCCTGTTGGC-3'	1056-1076
NM176070	2139 bp	5'-ATGGATCCTGGCGAAGATCCGAAATGAAATTGTTTG-3'	2054-2027
Zyx102EF	CG32018-RD	5'-ATCTCGAGTTGGAATTCAACAAACCAATTGATTATTTACAAAATAACC-3'	751-790
NM166816	1837 bp	5'-ATACTAGTATGTTCTGACGTCATGCGGTTTG-3'	1749-1727
rgr	CG8643-RA	5'-ATGGTACCGAGCAGATCTTCAACAAGATCAGC-3'	1719-1742
NM165611	4182 bp	5'-ATGAGCTCCTTGCCGCCCGCTTGC-3'	2717-2702
Rfx	CG6312-RA	5'-ATAAGCTTTGCGAGTCCTTCCTGGAC-3'	2290-2307
NM141742	3943 bp	5'-ATGGATCCTTCCTGCTTCAGTCGCTTGG-3'	3288-3269
Doc2	CG5187-RA	5'-ATGGTACCCTACAAGTTCTCCGGCTCCC-3'	694-713
NM140025	1940 bp	5'-ATGAGCTCTATGCTGAAGCCCTTGCTCC-3'	1732-1713
gem	CG30011-RA	5'-ATGGTACCTGCCAGATCAAGGTTTTTAAGCTAAAAGG-3'	3619-3647
NM165750	5096 bp	5'-ATGAGCTCATGAGCTCGTTGTTGTCCTGCTTGTTGATCAG-3'	4617-4594
CG10576	CG10576-RA	5'-ATAAGCTTGAGACCGGCAAAGTATACAAAAAGG-3'	453-477
NM139727	1895 bp	5'-ATGGATCCTGCCTTGGTCTCCACGGC-3'	1451-1434
mei-P26	CG12218-RA	5'-ATGGTACCAGGCGCTGGCCAAGCTGG-3'	3388-3405
NM143765	5253 bp	5'-ATGAGCTCGTGAACATAGAGGGTGTTCAGG-3'	4388-4367
Tra1	CG33554-RA	5'-ATCTCGAGCTTGTAGTTCTTGATTCAGGTTTGGG-3'	10494-10519
NM001014499	11521 bp	5'-ATACTAGTTAGCCAGGGATGCCAAGC-3'	11492-11475
CG5343	CG5343-RA	5'-ATGGTACCATGTTCAAAAACACTTTCCAATCGGGATTC-3'	201-230
NM135558	939 bp	5'-ATGAGCTCGCTACAAATCGCATTGGACTTCTG-3'	797-774
tgo	CG11987-RA	5'-ATGGTACCCCTACTGAGCTGCTGGGG-3'	1121-1138
NM169254	3106 bp	5'-ATGAGCTCCTCGAACGGCGTGCTGAA-3'	2119-2102
CG10462	CG10462-RA	5'-ATAAGCTTATGGATGCACCCAAACCCG-3'	1550-1568
NM136152	3034 bp	5'-ATGGATCCGTTCCTAATCGCATTTCCTGTATCTATTG-3'	2548-2520
HLHmgamma	CG8333-RA	5'-ATGGTACCTGTCCGAGATGTCCAAGACC-3'	102-121
NM079780	842 bp	5'-ATGAGCTCCCAGACGTTCTCCTCGTCC-3'	691-673
pan	CG17964-PE	5'-ATGGTACCCAGCTAAGTGATGACGACGAAG-3'	1555-1576
NM166721	2868 bp	5'-ATGAGCTCTGAAACGCTAATAACGCCGTTATCG-3'	2553-2529
Rel	CG11992-RA	5'-ATGGTACCGCGGACGGTGATAGTGCC-3'	2457-2474
NM057746	3504 bp	5'-ATGAGCTCAGTTGGGTTAACCAGTAGGGC-3'	3455-3435
Xbp1	CG9415-RA	5'-ATGGTACCATGGCACCCACAGCAAACAC-3'	333-352
NM079983	2145 bp	5'-ATGAGCTCGGCCATTAGCTCTATGCCC-3'	1253-1235
NC2alpha	CG10318-RA	5'-ATAAGCTTAACGCACGCTTTCCGGCG-3'	104-121
NM137757	1219 bp	5'-ATGGATCCAATATTGTCATAGTCTTCGTCTAATTCGAAAAC-3'	1102-1070
CG33182	CG33182-RA	5'-ATGGTACCTGGAAGAACATAACATATGTGGCGC-3'	505-529
NM176164	1920 bp	5'-ATGAGCTCAGCTGTGCCGTCGTCAATG-3'	1501-1485
CG3711	CG3711-RA	5'-ATGGTACCGAGGTGCGACTGGCCAAC-3'	2043-2060
NM130513	4038 bp	5'-ATGAGCTCGATATCTGTATTGATATTGATCCGCGTG-3'	3041-3014
ref(2)P	CG10360-RA	5'-ATGGTACCCAAGCTGAGCCCACTGTTAC-3'	1170-1189
NM057352	2417 bp	5'-ATGAGCTCGTTGCGGTTCTGCGATACG-3'	2168-2150
CG8145	CG8145-RA	5'-ATGGTACCGGAATTCTCCTTCAGCAGATTCC-3'	130-152
NM141564	1183 bp	5'-ATGAGCTCAACTTCCTGACACAAAAGGTCGAATTG-3'	1128-1102
CG31782	CG31782-RA	5'-ATGGTACCTTCCCAATGTGGAAAATCC-3'	1451-1469
NM165175	3198 bp	5'-ATGAGCTCGGACCTTTGGCATATAAAGC-3'	2495-2476
esg	CG3758-RA	5'-ATGGTACCATACCGTGGAAGACATGTTGG-3'	235-255

SUPPLEMENTARY TABLE 1 (CONTINUED)

NM057252	2287 bp	5'-ATGAGCTCTGAGTTCGCTGCTGCTGG-3'	1617-1600
ERR	CG7404-RB	5'-ATGGTACCCCGGCGAACAACGAGTGT-3'	567-584
NM139926	2157 bp	5'-ATGAGCTCCCTGGCCAGCGGCTC-3'	1565-1551
HLHm7	CG8361-RA	5'-ATCTCGAGCCACCAAATACGAGATGTCG-3'	130-149
NM080505	723 bp	5'-ATGAATTCCTGATCTGGAGCAGAGACTCG-3'	655-635
Pcl	CG5109-RA	5'-ATGGTACCTATGAGTTTAATACAGATGAAGATGACCCAG-3'	2626-2656
NM057324	3851- bp	5'-ATGAGCTCATTTCCAAGCAATCCAATCGCCG-3'	3624-3602
CG31716	CG31716-RA	5'-ATCTCGAGTTCTTCGATTTCCATAAAAGTCAGCCG-3'	2507-2533
NM164919	3623 bp	5'-ATACTAGTAACGAATTGACGGCTTTTTAAAAACTCAAGC-3'	3505-3475
tup	CG10619-RA	5'-ATGGTACCCAAAATGTGATAAATGCGGC-3'	802-821
NM057427	3238 bp	5'-ATGAGCTCGCTCTCCAGGTAGGTGACG-3'	1832-1814
CG3732	CG3732-RA	5'-ATGGTACCATGTCCAGTTCAAATGGAGGCG-3'	145-166
NM137848	1226 bp	5'-ATGAGCTCACGTCTGCCCGACGAGG-3'	990-974
CG7987	CG7987-RA	5'-ATGGTACCGCCAGCAAAGCACCTCCT-3'	2941-2958
NM142118	4203 bp	5'-ATGAGCTCAATGTGAATGTGCACATGTTCCAGC-3'	3939-3915
enok	CG11290-RA	5'-ATGGTACCTCCTTGCACAACCTGCAGTTC-3'	5875-5895
NM079114	6971 bp	5'-ATGAGCTCTCTGCGAATAGAACCGTTGAGAG-3'	6873-6851
Brf	CG31256-RA	5'-ATAAGCTTGGCAAGTACTCAAACTCCGTTTAC-3'	1158-1181
NM142359	2970 bp	5'-ATGGATCCGTATTCCTCCTCCTCGTCAAAAC-3'	2156-2134
CG3485	CG3485-RA	5'-ATGGTACCATGAGAGCCGCACTCAAAGAC-3'	43-63
NM134911	2216 bp	5'-ATGAGCTCTATTGAGCATTTGAAGGGACGTTCC-3'	1050-1032
Hcf	CG1710-RC	5'-ATGGTACCCAAGATGAAAATAAAAAGTTTAAACAACGGCAAG-3'	3630-3663
NM166757	7223 bp	5'-ATGAGCTCATCATGCAATCCGTTGCGTCC-3'	4628-4608
CG12942	CG12942-RA	5'-ATGGTACCGAGACGAAAGACAGGTCTGAAATG-3'	1152-1175
NM136784	2429 bp	5'-ATGAGCTCAGGTATCAAATTGAGCAGGTTGTCC-3'	2150-2126
CG6197	CG6197-RA	5'-ATGGTACCAATGTCTACGACATTTGGAACTCTTATCTAAC-3'	1728-1759
NM137047	2794 bp	5'-ATGAGCTCCTCTCCATCAGAGTCGCC-3'	2726-2709
H	CG5460-RB	5'-ATGGTACCCGTTCGCCACCGTACTCG-3'	2415-2432
NM169909	3879 bp	5'-ATGAGCTCGTGCTTTGACAGATTCAGTGGTAAG-3'	3413-3389
zfh1	CG1322-RB	5'-ATCTCGAGGCTCGACCCAGTAGGGAT-3'	2522-2539
NM057502	5803 bp	5'-ATGAATTCTTCCCTGTAGGGCTTGCAATAG-3'	3520-3499
vis	CG8821-RB	5'-ATAAGCTTAATGTGCTGACCAACTTTGAACAGTATG-3'	941-968
NM176157	2320 bp	5'-ATGGATCCGTCTCCCATGTAAACGAAATCGTC-3'	1939-1916
Trf2	CG18009-RA	5'-ATAAGCTTTGCAGCATGCCGTGGGC-3'	4147-4163
NM206654	6173 bp	5'-ATGGATCCGAAGGGCATATCCAATTCGTTGTTC-3'	5145-5121
Dsp1	CG12223-RA	5'-ATGGTACCCTGTTCACATACAAAATGGCCAGC-3'	353-376
NM167503	2440 bp	5'-ATGAGCTCTTGGTTCTCGTCATCATCTCCATC-3'	1351-1328
Smox	CG2262-RA	5'-ATGGTACCACGCACCAGATACCCAACAAC-3'	1301-1321
NM078524	3152 bp	5'-ATGAGCTCTGACATGGAGCTGCACGG-3'	2299-2282
Su(Tpl)	CG32217-RA	5'-ATGGTACCATGGGTAGTGTTGGTCCTAGTG-3'	2990-3011
NM140898	4129 bp	5'-ATGAGCTCGTAGCGTGCCTCATCGTC-3'	3988-3971
CG5640	CG5640-RB	5'-ATGGTACCAACATTGTTCTCAAACGTAAAAAACACAAAATAAACA G-3'	2055-2092
NM164907	3116 bp	5'-ATGAGCTCCTGAGTGTATGCTAGTCCTTGG-3'	3053-3032
Max	CG9648-RA	5'-ATCTCGAGATGAGTATGAGCGACGACGAC-3'	167-187
NM140840	1011 bp	5'-ATGAATTCTGCGTGGAAGGTCTTCATCTTTTTATTG-3'	649-622
phol	CG3445-RA	5'-ATCTCGAGGTGGTTAATGCATTTATGGGCGATG-3'	1631-1655
NM140060	3132 bp	5'-ATGAATTCGGATGTTAGGGACGTGCC-3'	2629-2612
bun	CG5461-RA	5'-ATGGTACCAACACTTCCAATGCAGCGG-3'	3470-3488
NM080364	5716 bp	5'-ATGAGCTCATTGGCTGTGACTACCGATGC-3'	4522-4502
CG14802	CG14802-RA	5'-ATGGTACCATGGCGATTGTGTCGTCGG-3'	106-124
NM130592	839 bp	5'-ATGAGCTCCGGCATGCCGCCCAG-3'	756-742
l(2)NC136	CG8426-RA	5'-ATGGTACCCAGCAACTAGCAGTAACTCCTAC-3'	2111-2133
NM136332	3405 bp	5'-ATGAGCTCATTCAGCTCCTTGTCCTCTAAGTAC-3'	3109-3085
NC2beta	CG4185-RA	5'-ATGGTACCATCCGCAGGAAGAACTACTGC-3'	107-127
NM135892	720 bp	5'-ATGAGCTCCATCGTCATCCTCACTTGGC-3'	628-609
sna	CG3956-RA	5'-ATCTCGAGCAGCAGCCGGAACCGAAA-3'	334-351
NM057384	1677 bp	5'-ATGAATTCCGCAATAGTGATGGTGCAGTTG-3'	1332-1311
Trap25	CG17183-RA	5'-ATGGTACCATGTGGAAATACGGTCAAAACCAGG-3'	189-213
NM138202	1218 bp	5'-ATGAGCTCTGAGCGCCGCATGGCC-3'	1142-1127
ttk	CG1856-RF	5'-ATGGTACCGAATATGACGAGCCCGTAGAG-3'	1476-1496
NM170568	4174 bp	5'-ATGAGCTCCTGCGCCGCAGCTGC-3'	2474-2460

* Genbank accession No.

† FlyBase_Annotation_IDs and the length of the transcripts are shown.

The nucleotide sequences of the primer pairs are shown. The recognition sequences of restriction enzymes (*BamH*I, *EcoR*I, *Hind*III, *Kpn*I, *Sac*I, *Spe*I, *Xho*I) are underlined.

** The positions corresponding to the primers in the transcripts are shown.

SUPPLEMENTRY TABLE 2

COMPARISON OF EXPRESSION ANNOTATION AMONG WISH DATABASES

Genes[#]	Fly-FISH[*]	BDGP[*]	Genes[#]	Fly-FISH[*]	BDGP[*]
CG10445	ND	ND	*NC2alpha*	ND	-
Arc70	+	+	*ref(2)P*	ND	+
sd	ND	-	*Pcl*	ND	-
bip2	+	-	*CG31716*	ND	ND
EP2237	ND	+	*Hcf*	ND	ND
ovo	-	-	*H*	ND	ND
CG3136	+	-	*zfh1*	ND	-
Tif-IA	ND	+	*Trf2*	ND	ND
Zyx102EF	ND	ND	*Dsp1*	ND	ND
rgr	-	ND	*Smox*	+	ND
mei-P26	ND	+	*CG5640*	-	ND
Tra1	ND	ND	*l(2)NC136*	+	ND
CG10462	+	-	*ttk*	+	-
Rel	ND	+			

The 27 genes identified to be enriched in the germ plasm by our WISH analysis.

* Expression annotation of the listed genes in Fly-FISH (http://fly-fish.ccbr.utoronto.ca/) and BDGP (http://www.fruitfly.org/cgi-bin/ex/insitu.pl) WISH databases. (+) Signals are enriched in the germ plasm and/or pole cells at stage 4-5. (-) Signals are enriched in neither of these regions. ND: No data are available.

SUPPLEMENTRY TABLE 3

LIST OF PRIMERS FOR RT-PCR ANALYSIS

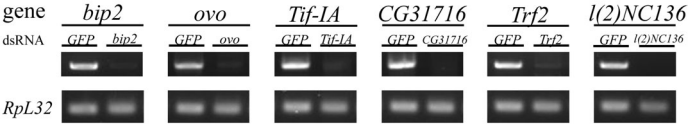
Gene Name Accession No. *	ID Length[†]	sequence[#]	position**
bip2	CG2009-RA	5'- GTCAAATGCATCAATTTACCCTGG -3'	2288-2311
NM143666	4515 bp	5'- CGGTTCCAACGACGTTAATCC -3'	3281-3261
ovo	CG6824-RA	5'- AAAAGAGAAGCCCGCAGAGCG -3'	281-301
NM080338	4710 bp	5'- TGAATTGGGTCCGTAGTTCCC -3'	1214-1194
Tif-IA	CG3278-RA	5'- GGAACTCAAAACAACGTGCATATTTCC -3'	37-63
NM176070	2139 bp	5'- TTTCGGCGCATACATCGTCG -3'	1035-1016
CG31716	CG31716-RA	5'- CGTGGAAAAGATCGGACCAC -3'	1511-1530
NM164919	3623 bp	5'- CGCCAAATAGATTTTCGCCTGC -3'	2492-2471
Trf2	CG18009-RA	5'- AAACGTCAGTTGCGTTTGCAGC -3'	3148-3169
NM206654	6173 bp	5'- GGTGCCCAGTACGTTGACAATG -3'	4146-4125
l(2)NC136	CG8426-RA	5'- CCGCCATAAGTTCCACATAAC -3'	1111-1131
NM136332	3405 bp	5'- GGACCATTTTCCAGGAGTGATGTATTG -3'	2100-2074
RpL32	CG7939-RA	5'- AGCGCACCAAGCACTTCATC -3'	59-78
NM170568	590 bp	5'- GACGCACTCTGTTGTCGATACC -3'	154-133

* Genbank accession No.

† FlyBase_Annotation_IDs and the length of the transcripts are shown.

The nucleotide sequences of the primer pairs are shown.

** The positions corresponding to the primers in the transcripts are shown.



Supplementary Fig. S1. Reduction in target mRNA levels by injecting dsRNAs. *Transcripts from* bip2, ovo, Tif-IA, CG31716, Trf2, *and* l(2)NC136 *in the embryos injected with dsRNAs against each of the six transcripts and in control embryos injected with dsRNA against* GFP *were detected by RT-PCR (see Materials and methods). As a control, data for* Ribosomal protein L32 *(*RpL32*) RNA is shown.*