Supplementary Table 2. miRNA:target interaction energy computed by $\sum\Delta G_{total}$ and predicted functional interaction [a] for which experimental tests have been published [b]

Organism & references [c]	miRNA	Target	Experimental evidence	$\sum\Delta G_{total}$ (kcal/ mol)	Predicted functional interaction	Average $\sum\Delta G_{total}$ of randomers (kcal/mol)
Ce [1,2]	*let-7*	hbl-1	+	-191.69	+	-6.185
Ce [3]	*let-7*	lin-41	+	-83.65	+	-5.390
Ce [4]	*let-7*	daf-12	+	-157.42	+	-3.368
Ce [4]	*let-7*	pha-4	+	-24.72	+	-0.071
Ce [5,6]	*lin-4*	lin-14	+	-41.44	+	-1.069
Ce [7]	*lin-4*	lin-28	+	-12.72	+	-0.187
Ce [8,9]	*lsy-6*	cog-1	+	-38.89	+	-0.077
Ce [10]	*miR-84*	let-60	+	-84.02	+	-1.506
Ce [11]	*miR-273*	die-1	+	-11.23	+	-0.158
Dm [12]	*bantam*	Hid	+	-38.43	+	-0.212
Dm [13]	*miR-9a*	sens	+	-16.49	+	-1.184
Ce [14]	*let-7*	T14B1.1 [d]	+	-119.88	+	-3.535
Ce [14]	*let-7*	uba-1	+	-28.04	+	-0.014
Ce [14]	*let-7*	C35E7.4 [d]	+	-14.73	+	-1.167
Ce [14]	*let-7*	unc-129 [d]	+	-28.06	+	-1.348
Ce [14]	*let-7*	nhr-4 [d]	+	0.00	−	-1.010
Ce [14]	*let-7*	F29G9.4	+	-17.84	+	-1.811
Ce [14]	*let-7*	C27D6.4	+	-33.88	+	-1.040
Ce [14]	*let-7*	C48A7.2	+	0.00	−	-0.143
Ce [14]	*let-7*	K08F8.1	+	-38.85	+	-0.843
Ce [14]	*let-7*	K07A6.2	+	NA [e]		
Ce [14]	*let-7*	ceh-16 [d]	+	-39.16	+	-0.077
Ce [14]	*let-7*	oig-2 [d]	+	0.00	−	-0.214
Ce [15,16]	*miR-48*	hbl-1	+	-161.00	+	-6.184
Ce [15]	*miR-84*	hbl-1	+	-115.52	+	-5.541
Ce [15]	*miR-241*	hbl-1	+	-266.45	+	-4.177
Ce [17]	*let-7*	nhr-23	+	-38.84	+	-0.858
Ce [17]	*let-7*	nhr-25	+	-23.66	+	-0.472
Ce [17]	*miR-84*	nhr-23	+	-25.30	+	-0.013
Ce [17]	*miR-84*	nhr-25	+	-46.18	+	-0.754
Dm [18]	*miR-7*	Bearded	+	-23.29	+	-1.609
Dm [18]	*miR-7*	E(spl)m5	+	-69.92	+	-2.901
Dm [18]	*miR-4*	Bearded	+	-14.38	+	-1.609
Dm [18]	*miR-79*	Bearded	+	-17.47	+	-1.613
Dm [18]	*miR-7*	E(spl)mγ	+	-0.85	−	-0.062
Dm [18]	*miR-7*	Tom	+	-17.84	+	-0.912
Dm [18]	*miR-7*	Bob	+	NA [e]		
Dm [19]	*miR-7*	Hairy	+	-27.87	+	-2.277
Dm [18]	*miR-7*	Cut	+	-13.09	+	-1.493
Dm [18]	*miR-7*	Wingless	+	-1.25	−	-3.65
Dm [18]	*miR-4*	Tom	+	0.00	−	-0.912
Dm [18]	*miR-4*	E(spl)mδ	+	0.00	−	-2.258
Dm [18]	*miR-4*	E(spl)mγ	+	0.00	−	-0.062

Supplementary Table 2 (continued)

Organism & references [c]	miRNA	Target	Experimental evidence	$\sum\Delta G_{total}$ (kcal/ mol)	Predicted functional interaction	Average $\sum\Delta G_{total}$ of randomers (kcal/mol)
Dm [18]	*miR-4*	E(spl)mα	+	NA [e]		
Dm [18]	*miR-4*	E(spl)m4	+	NA [e]		
Dm [18]	*miR-4*	E(spl)m5	+	-13.00	+	-2.901
Dm [18]	*miR-79*	Tom	+	0.00	−	-0.912
Dm [18]	*miR-79*	E(spl)mδ	+	-10.68	+	-2.258
Dm [18]	*miR-79*	E(spl)mγ	+	0.00	−	-0.062
Dm [18]	*miR-79*	E(spl)mα	+	NA [e]		
Dm [18]	*miR-79*	E(spl)m4	+	NA [e]		
Dm [18]	*miR-79*	E(spl)m5	+	0.00	−	-2.877
Dm [19]	*miR-2b*	grim	+	-2.06	−	-2.373
Dm [19]	*miR-2a*	reaper	+	-16.81	+	-1.810
Dm [19]	*miR-2b*	sickle	+	-20.04	+	-1.671
Dm [18]	*miR-7*	E(spl)m3	+	-21.77	+	-1.611
Ce [9]	*lsy-6*	ZK637.13	–	-13.86	+	-2.124
Ce [9]	*lsy-6*	C02B8.4	–	-4.22	−	-0.081
Ce [9]	*lsy-6*	F55G1.1	–	0.00	−	-0.001
Ce [9]	*lsy-6*	C48D5.2a	–	-0.04	−	-1.833
Ce [9]	*lsy-6*	F59A6.1	–	-2.72	−	-4.541
Ce [9]	*lsy-6*	F40H3.4	–	0.00	−	-0.042
Ce [9]	*lsy-6*	T05C12.8	–	0.00	−	-0.001
Ce [9]	*lsy-6*	C27H6.3	–	-0.06	−	-0.530
Ce [9]	*lsy-6*	T23E1.1	–	0.00	−	-0.110
Ce [9]	*lsy-6*	T14G12.2	–	0.00	−	-0.001
Ce [9]	*lsy-6*	T20G5.9	–	0.00	−	-0.085
Ce [9]	*lsy-6*	R07E3.5	–	0.00	−	-0.027

[a] An interaction is predicted to be functional ("+") if for nucleation potential threshold of 4.09 kcal/mol, the sum of $\Delta G_{total} < -10$ kcal/mol; otherwise, the interaction is non-functional ("−");
[b] Positive interactions confirmed by conventional genetic epistasis are in shaded part of the table;
[c] Ce: *C. elegans*; Dm: *D. melanogaster*;
[d] Conflicting experimental evidence presented in the reference;
[e] 3′ UTR sequence is not available from the WormBase Release 1.44 (http://www.wormbase.org), or from the FlyBase Release 4.3 (http://www.flybase.org).

[1]Abrahante et al, 2003; [2]Lin et al, 2003; [3]Slack et al, 2000; [4]Grosshans et al, 2005; [5]Lee et al, 1993; [6]Wightman et al, 1993; [7]Moss et al, 1997; [8]Johnston and Hobert,2003; [9]Didiano and Hobert, 2006; [10]Johnson et al, 2005; [11]Chang et al, 2004; [12]Brennecke et al, 2003; [13]Li et al, 2006; [14]Lall et al, 2006; [15]Abbott et al, 2005 ; [16]Li et al, 2005; [17]Hayes et al, 2006; [18]Lai et al, 2005; [19]Stark et al, 2003.

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