

Supplemental Figure 2: Sequence alignment of Hbr DME in *D. melanogaster* and *D. virilis*. Verified and predicted TF binding sites are shown in color. Basepair numbering corresponds to that shown in Figure 3.

	10	20	30	40	50	60
<i>D. mel</i>	aaagtcacaggtttatggtttatgagtcgctcaggactcctttgcacgatcattgtgtat					
<i>D. vir</i>	-----					
	70	80	90	100	110	120
<i>D. mel</i>	tcatcataagcggttttcaagggtttcgctttcatgacatctgatgatttaagttgatttaa					
<i>D. vir</i>	-----					
	130	140	150	160	170	180
<i>D. mel</i>	ggcacttcgtgtgacgttttaaattccagcgcaattttcgagtcctcaaagagatgagaaat					
<i>D. vir</i>						
	ggcac-----ac-----anttnc-----					
	10					
	190	200	210	220	230	240
<i>D. mel</i>	aagtagtagatgagatactgaggagtgtttcatacatagaaattcagagcatgtagatct					
<i>D. vir</i>	-----cg					
	250	260	270	280	290	300
<i>D. mel</i>	gcttttagaagtgccgcaatttattagaagtgtgccattaaagttttactattataaaaa					
<i>D. vir</i>						
	gc---aaaagggcc-----agtngcagt-tgc-----ntttttgctntt-----					
	20	30	40	50		
	310	320	330	340	350	360
<i>D. mel</i>	caatagattctctcctttattgttattattatcaattataataacggttgcccacagcgc					
<i>D. vir</i>						
	--ttaga--ctctcc-----caattgt-----cgg-----					
	60	70				
	370	380	390	400	410	420

D. mel cttatttctaaaaatgatcaccacccatatttcgacacacttatcgctatggtcacttgcaa
 ||| ||| | || | | ||| || | || | ||
D. vir -----aaanatgttgactc-----tgtaca-ac--atggc---gg-----
 80 90 100

430 440 twi 450 460 470 480
D. mel tccattcgaatctttcgc**catatg**caggaaactaggcaattcgcctcaatcggcaattaa
 || || | | | ||| ||| ||| |||||
D. vir --natgcgcaacctgcg-----gca--aaa--aggcaa-----
 110 120

490 500 510 520 530 540
D. mel cccacaacaccacgaacaattcatttctaacacctaataatttatggcaaagtaaaaacaa
 |||| | ||| | |||||
D. vir -----aacatc-----aacna-----caaaaacaa
 130 140

550 560 570 580 590 600
D. mel accgaaccgaatatctctgccatatttgcgagtggtcccactgcagttgccagttcgattg
D. vir -----

610 620 630 640 650 660
D. mel gcataagttatacgcatcttccgctctttcaataacaatggccattgcattttgttattat
 ||| |||||
D. vir -----caacaacaa-----
 150

670 680 690 700 710 720
D. mel gttgctggcaacggggcggatgggcaacatgggcgatattggatgtgcggatggtggagt
 ||| ||| |||||
D. vir -----aatg-----aca-----agagt
 160

730 740 750 760
D. mel caacaaacgaatcg-----cttgacgtg---ggcgggtgggtgtggccgc-----atga
 ||| ||||| ||| | ||| ||||| ||| |
D. vir caataaacgaatcgtagcgatgcgccctgccctccagtgggtgtggcagccgtgacaagca
 170 180 190 200 210 220

770 780 790 800 810
D. mel ggagcataaattgaagaactgcaca---tccaataaggcac--aaccaactggc-----

[illegible]

[illegible]

	980	990	1000	1010	1020	1030
<i>D. mel</i>	aaaaaaaaaatgtggcaggcagccc					
<i>D. vir</i>	-----					
	1540	1550	1560	1570 tin	1580	mad
<i>D. mel</i>	aaaat--tcaaaatcgaaaatcct--atcg--aggaacttaagtgtc---ttcc ttggcg					
<i>D. vir</i>	atgctggnctttgctgaatttccttgaccggcaggacatcgcatatccagttgccgcac					
	1040	1050	1060	1070	1080	1090
	1590	1600	1610	1620	1630	1640
<i>D. mel</i>	gct gagtccaacacctgttgcattcataaata-----cgaagttgggatttgagc--ag					
<i>D. vir</i>	tcgtagcccaacacctgttgcattcataaataataaccaaaaaagaatctcagcttta					
	1100	1110	1120	1130	1140	1150
	1650	1660	1670	1680	1690	1700
<i>D. mel</i>	agtcggcgtaattaacataatTTTTGGtaggataataacactactccacaaaaataaa					
<i>D. vir</i>	agcatgcttaatttacataatTTTGGGCCCGCCTGga-----ggtctgccgaggataa-					
	1160	1170	1180	1190	1200	1210
	1710	1720	1730	1740	1750	1760
<i>D. mel</i>	ttcaagtataagtaacataattaacaatatTTTgctcacgtttccattcggaggtttcct					
<i>D. vir</i>	-----cataacaagcatgct---tatatTTTgctcacgt-cccaatctgaggtttncct					
	1220	1230	1240	1250	1260	
	1770	1780	1790	1800	1810	1820
<i>D. mel</i>	TTTTTcctgtctTTTgTTgcaactatTTTataaaaggcgataataaggaggatcaaaatgc					
<i>D. vir</i>	TTTT-----gTTgTTg-----TTTT-----TG-					
	1270					
	1830	1840	1850	1860	1870	1880
<i>D. mel</i>	taagataacacatcgTTaatttatatgtgggtaaattctttattaattttccaagtTtc					
<i>D. vir</i>	-----tcatttccat-----TTTatttttc-----ttc					
	1280			1290		1300
	1890	1900	1910	1920	1930	1940

<i>D. mel</i>	aaaatatattactttttttattactctcccagttactttcaagttaaggtttccatctcccct
<i>D. vir</i>	a-----ttttt-----cttt--agctga-----ct
	1310

	1950
<i>D. mel</i>	ttaagatttat-----
<i>D. vir</i>	---atttttatctgaattcgtcgcacaagcttctcgagcctaggctagntctagaccacac
	1320 1330 1340 1350 1360 1370

<i>D. mel</i>	-----g
<i>D. vir</i>	gtgtggggggcccgagtcgcggccgctgtttctatagtgtc
	1380 1390 1400 1410