

**附录7** 甘蓝型油菜与白菜 *ZF-HD* 共线性基因的  $K_a/K_s$  比值

**Appendix 7** The  $K_a/K_s$  ratios for orthologous *ZF-HD* genes between *Brassica napus* and *B. rapa*

Seq_1	Seq_2	$K_a$	$K_s$	$K_a/K_s$
BrZF-HD10	BnZF-HD1	0.005785	0.019684	0.293894
BrZF-HD10	BnZF-HD19	0.060467	0.494733	0.122222
BrZF-HD19	BnZF-HD9	0.010857	0.021604	0.502575
BrZF-HD11	BnZF-HD18	0.002956	0	-
BrZF-HD11	BnZF-HD14	0.083041	0.46362	0.179115
BrZF-HD31	BnZF-HD13	0	0	-
BrZF-HD26	BnZF-HD23	0	0	-
BrZF-HD26	BnZF-HD6	0.109061	0.334815	0.325736
BrZF-HD7	BnZF-HD28	0.003338	0.038103	0.087591
BrZF-HD16	BnZF-HD11	0.001263	0	-
BrZF-HD16	BnZF-HD22	0.097364	0.385454	0.252597
BrZF-HD17	BnZF-HD8	0	0	-
BrZF-HD3	BnZF-HD16	0.003777	0.018731	0.201648
BrZF-HD3	BnZF-HD2	0.049929	0.285626	0.174804
BrZF-HD12	BnZF-HD17	0	0	-
BrZF-HD12	BnZF-HD15	0.07305	0.312606	0.233682
BrZF-HD15	BnZF-HD12	0	0.015307	0
BrZF-HD15	BnZF-HD21	0.02777	0.425441	0.065274
BrZF-HD18	BnZF-HD10	0	0	-
BrZF-HD18	BnZF-HD20	0.030218	0.2487	0.121504
BrZF-HD18	BnZF-HD24	0.035375	0.2487	0.14224
BrZF-HD20	BnZF-HD3	0.01414	0.034081	0.414889
BrZF-HD6	BnZF-HD18	0.042302	0.488381	0.086617
BrZF-HD6	BnZF-HD14	0.086937	0.449453	0.193429
BrZF-HD27	BnZF-HD13	0.12998	0.589983	0.220311
BrZF-HD5	BnZF-HD16	0.045905	0.285269	0.160919
BrZF-HD5	BnZF-HD2	0.003801	0.006179	0.615139
BrZF-HD4	BnZF-HD5	0.009562	0.008242	1.160163
BrZF-HD13	BnZF-HD10	0.030218	0.2487	0.121504
BrZF-HD13	BnZF-HD20	0	0	-
BrZF-HD13	BnZF-HD24	0.03013	0.298979	0.100775
BrZF-HD8	BnZF-HD1	0.064796	0.484643	0.133699
BrZF-HD8	BnZF-HD19	0.002028	0	-
BrZF-HD22	BnZF-HD9	0.04949	0.322705	0.153358
BrZF-HD1	BnZF-HD18	0.080108	0.490009	0.163483
BrZF-HD1	BnZF-HD14	0.007286	0.048296	0.150863
BrZF-HD9	BnZF-HD23	0.190587	0.47498	0.401252
BrZF-HD9	BnZF-HD6	0.070276	0.094271	0.745466
BrZF-HD29	BnZF-HD11	0.086776	0.364166	0.238286
BrZF-HD29	BnZF-HD22	0.00778	0.020584	0.377962
BrZF-HD21	BnZF-HD25	0	0.053634	0

BrZF-HD2	BnZF-HD17	0.07305	0.335773	0.217559
BrZF-HD2	BnZF-HD15	0	0.014635	0
BrZF-HD30	BnZF-HD12	0.020093	0.420431	0.047792
BrZF-HD30	BnZF-HD21	0	0.013699	0
BrZF-HD24	BnZF-HD10	0.035375	0.2487	0.14224
BrZF-HD24	BnZF-HD20	0.03013	0.298979	0.100775
BrZF-HD24	BnZF-HD24	0	0	-
Means		0.035521	0.195998	0.227615