

Table 1 Suppl2. Information and characterization of WRKY TFs in barley.

Gene Name	Transcript name	Ensembl gene ID	Ensembl transcript ID	Coding sequence [bp]	Protein length aa (WRKY domain)	Number of introns	UniProt	Chromosome No: region (direction)	Pervious name	UniGene	NCBI DNA ID	NCBI protein ID	MIPS acc No
HvWRKY_I1	HvWRKY_I1.1	HORVU1Hr1G070250	HORVU1Hr1G070250.1	2102	268 (57-113) (224-248)	-	A0A287G467	1:488800507-488800866 (-)	HvWRKY43	Hv.29827	DQ863126	ABI13408	MLOC_72586
	HvWRKY_I1.2		HORVU1Hr1G070250.2	2094	512 (178-234)	3	M0YT11						
	HvWRKY_I1.3		HORVU1Hr1G070250.3	1411	404 (178-234) (345-402)	3	A0A287G466						
	HvWRKY_I1.4		HORVU1Hr1G070250.4	1554	389 (178-234) (345-369)	2	A0A287G474						
	HvWRKY_I1.5		HORVU1Hr1G070250.5	996	281 (57-113) (224-281)	1	A0A287G473						
	HvWRKY_I1.6		HORVU1Hr1G070250.6	1418	402 (178-234) (345-402)	3	A0A287G470						
	HvWRKY_I1.7		HORVU1Hr1G070250.8	1403	401 (178-234) (345-401)	3	A0A287G472						
	HvWRKY_I1.8		HORVU1Hr1G070250.9	1053	350 (140-196) (307-350)	2	A0A287G480						
	HvWRKY_I1.9		HORVU1Hr1G070250.10	1230	342 (178-234)	1	A0A287G464						
HvWRKY_I2	HvWRKY_I2.1	HORVU2Hr1G034420	HORVU2Hr1G034420.1	2228	320 (134-189) (300-320)	3	-	2:140217235-140219215 (-)	HvWRKY41, HvWRKY35	Hv.9019	DQ863124, DQ863119, AK365469	ABI13406	MLOC_5850
	HvWRKY_I2.2		HORVU2Hr1G034420.2	1669	448 (177-232) (343-400)	3	B2KJ81						
	HvWRKY_I2.3		HORVU2Hr1G034420.3	1540	405 (134-189) (300-357)	4	-						
	HvWRKY_I2.4		HORVU2Hr1G034420.4	1021	168 (63-120)	3	A0A287HNS7						
	HvWRKY_I2.5		HORVU2Hr1G034420.5	1206	363 (177-232) (343-363)	2	-						
HvWRKY_I3	HvWRKY_I3.1	HORVU2Hr1G036320	HORVU2Hr1G036320.1	2589	615 (231-287) (405-462)	5	A0A287HPM5 A0A288P794 Q6VWJ6	2:160428096-160433426 (+)	HvWRKY46/ SUSIBA2	Hv.15882	AY323206	AAQ63880	MLOC_74884
	HvWRKY_I3.2		HORVU2Hr1G036320.2	2453	526 (231-287) (381-438)	4	A0A287HPX8						
	HvWRKY_I3.3		HORVU2Hr1G036320.3	2354	591 (142-198) (316-373)	5	A0A287HPY1						
	HvWRKY_I3.4		HORVU2Hr1G036320.4	1901	552 (168-224) (342-399)	5	A0A287HPY4						
HvWRKY_I4	HvWRKY_I4.1	HORVU3Hr1G088200	HORVU3Hr1G088200.1	2221	558 (215-271) (375-432)	3	M0YCC3	3:624066532-624067234 (+)	HvWRKY50	Hv.20957	AK357671	BAJ88885	MLOC_67851
	HvWRKY_I4.2		HORVU3Hr1G088200.2	1563	168 (-)	1	A0A287M515						
	HvWRKY_I4.3		HORVU3Hr1G088200.3	2231	255 (72-129)	2	A0A287M513						
	HvWRKY_I4.4		HORVU3Hr1G088200.4	2071	599 (256-312) (416-473)	3	A0A287M507						
	HvWRKY_I4.5		HORVU3Hr1G088200.6	2333	404 (61-117) (221-278)	2	A0A287M504						
	HvWRKY_I4.6		HORVU3Hr1G088200.7	2588	215 (-)	1	A0A287M520						
	HvWRKY_I4.7		HORVU3Hr1G088200.8	1567	379 (254-310)	2	A0A287M519						
	HvWRKY_I4.8		HORVU3Hr1G088200.9	1209	402 (59-115) (219-276)	2	A0A287M512						
HvWRKY_I5	HvWRKY_I5.1	HORVU4Hr1G048400	HORVU4Hr1G048400.1	2198	529 (246-302) (414-471)	3	A0A287NZB4	4:390706507-390734365 (-)	HvWRKY57	Hv.25183	AK250089	---	MLOC_31894
	HvWRKY_I5.2		HORVU4Hr1G048400.2	2273	395 (246-302)	2	A0A287NYH7						
	HvWRKY_I5.3		HORVU4Hr1G048400.3	2155	412 (246-302)	2	A0A287NZB8						
	HvWRKY_I5.4		HORVU4Hr1G048400.4	2067	398 (235-291)	3	A0A287NYD1						
	HvWRKY_I5.5		HORVU4Hr1G048400.5	2065	416 (235-291)	1	A0A287NYR7						
	HvWRKY_I5.6		HORVU4Hr1G048400.6	2142	384 (235-291)	1	A0A287NYD3						
	HvWRKY_I5.7		HORVU4Hr1G048400.7	1724	246 (97-153)	1	A0A287NYI2						

	HvWRKY_I5.8		HORVU4Hr1G048400.8	1756	238 (89-145)	2	A0A287NZC3								
	HvWRKY_I5.9		HORVU4Hr1G048400.9	2190	402 (253-309)	2	A0A287NYD6								
	HvWRKY_I5.10		HORVU4Hr1G048400.10	1482	372 (89-145) (257-314)	3	M0VJY5								
	HvWRKY_I5.11		HORVU4Hr1G048400.11	1463	486 (203-259) (371-428)	4	A0A287NYR2								
	HvWRKY_I5.12		HORVU4Hr1G048400.12	1444	388 (106-162) (274-331)	4	A0A287NYC7								
HvWRKY_I6	HvWRKY_I6.1	HORVU5Hr1G028340	HORVU5Hr1G028340.1	2128	492 (224-280) (381-438)	3	A0A287QRJ5 I7B2W4	5:167140345-167145773 (+)	HvWRKY61	---	JX216840	AFO38354	MLOC_69575		
	HvWRKY_I6.2		HORVU5Hr1G028340.2	1986	400 (268-324)	2	A0A287QS44								
	HvWRKY_I6.3		HORVU5Hr1G028340.3	1585	355 (87-143) (244-301)	7	A0A287QRN4								
HvWRKY_I7	HvWRKY_I7.1	HORVU5Hr1G049030	HORVU5Hr1G049030.1	1221	334 (116-172) (276-331)	4	M0UGA7	5:379856815-379858280 (-)	HvWRKY40	Hv29818	DQ863123	ABI13405	MLOC_10687		
	HvWRKY_I7.2		HORVU5Hr1G049030.2	743	160 (18-74)	2	A0A287R4L9								
	HvWRKY_I7.3		HORVU5Hr1G049030.3	1005	334 (116-172) (276-331)	3	M0UGA7								
	HvWRKY_I7.4		HORVU5Hr1G049030.4	799	251 (116-172)	2	A0A287R4V0								
	HvWRKY_I7.5		HORVU5Hr1G049030.5	1399	261 (-)	2	A0A287R4A8								
	HvWRKY_I7.6		HORVU5Hr1G049030.6	1228	258 (-)	-	A0A287R4J1								
	HvWRKY_I7.7		HORVU5Hr1G049030.7	748	249 (-)	1	A0A287R4M4								
HvWRKY_I8	HvWRKY_I8.1	HORVU5Hr1G072020	HORVU5Hr1G072020.1	3335	676 (276-332) (489-546)	6	M0X915	5:534724139-534724796 (+)	HvWRKY42	Hv.15670	DQ863125	ABI13407	MLOC_58019		
	HvWRKY_I8.2		HORVU5Hr1G072020.2	2632	449 (276-332)	5	M0X916								
	HvWRKY_I8.3		HORVU5Hr1G072020.3	3054	449 (276-332)	5	M0X916								
	HvWRKY_I8.4		HORVU5Hr1G072020.4	2300	540 (276-332) (489-537)	6	A0A287RR41								
	HvWRKY_I8.5		HORVU5Hr1G072020.5	2221	518 (276-332) (467-518)	7	A0A287RRB3								
	HvWRKY_I8.6		HORVU5Hr1G072020.6	3026	356 (276-332)	7	A0A287RQW6								
	HvWRKY_I8.7		HORVU5Hr1G072020.7	2259	534 (276-332) (489-533)	6	A0A287RR75								
	HvWRKY_I8.8		HORVU5Hr1G072020.8	2197	539 (276-332) (489-536)	6	A0A287RR68								
	HvWRKY_I8.9		HORVU5Hr1G072020.9	2199	532 (276-332) (489-531)	6	A0A287RR47								
	HvWRKY_I8.10		HORVU5Hr1G072020.10	2170	533 (276-332) (489-533)	6	A0A287RR30								
	HvWRKY_I8.11		HORVU5Hr1G072020.11	2158	537 (276-332) (489-537)	6	A0A287RRA1								
	HvWRKY_I8.12		HORVU5Hr1G072020.12	2623	538 (276-332) (489-537)	5	A0A287RQV6								
	HvWRKY_I8.13		HORVU5Hr1G072020.13	2371	541 (276-332) (489-537)	5	A0A287RR62								
	HvWRKY_I8.14		HORVU5Hr1G072020.14	1732	499 (276-332) (450-498)	5	A0A287RR57								
	HvWRKY_I8.15		HORVU5Hr1G072020.15	1672	539 (276-332) (489-539)	5	A0A287RR35								
	HvWRKY_I8.16		HORVU5Hr1G072020.16	1814	473 (424-472)	5	A0A287RRA6								
	HvWRKY_I8.17		HORVU5Hr1G072020.17	1191	361 (104-160) (317-361)	4	A0A287RQW2								
HvWRKY_I9	HvWRKY_I9.1	HORVU5Hr1G096800	HORVU5Hr1G096800.1	1560	431 (197-253) (325-382)	3	A0A287SEW2	5:602262422-602273880 (-)	HvWRKY65	Hv.36645	AK363803	BAJ95006	MLOC_59246		
	HvWRKY_I9.2		HORVU5Hr1G096800.2	466	87 (1-38)	-	M0XDY2								
	HvWRKY_I9.3		HORVU5Hr1G096800.3	1018	338 (232-289)	2	A0A287SEN1								
	HvWRKY_I9.4		HORVU5Hr1G096800.4	971	323 (233-290)	3	A0A287SEX2								

	HvWRKY_I9.5		HORVU5Hr1G096800.5	1260	419 (185-241) (313-370)	3	A0A287SEU3							
	HvWRKY_I9.6		HORVU5Hr1G096800.6	2937	430 (185-241) (330-387)	11	A0A287SES1							
HvWRKY_I10	HvWRKY_I10	HORVU7Hr1G049130	HORVU7Hr1G049130.1	1569	245 (91-148)	4	A0A287WFB4	7:170723697-170724483 (-)	HvWRKY90	---	---	---	---	morex_contig_274189_prediction
HvWRKY_I11	HvWRKY_I11.1	HORVU7Hr1G066670	HORVU7Hr1G066670.1	2162	568 (246-302) (414-471)	3	A0A287WRB7	7:342977877-342999033 (-)	HvWRKY6	Hv.20442	EF488106	ABR87003	---	
	HvWRKY_I11.2		HORVU7Hr1G066670.2	1675	410 (88-144) (256-313)	3	A0A287WRF5 Q5W1F6							
	HvWRKY_I11.3		HORVU7Hr1G066670.3	1288	411 (89-145) (257-314)	3	A0A287WR82							
	HvWRKY_I11.4		HORVU7Hr1G066670.4	1743	580 (258-314) (426-483)	6	A0A287WR60							
	HvWRKY_I11.5		HORVU7Hr1G066670.5	1127	366 (82-138) (250-307)	2	A0A287WR68							
	HvWRKY_I11.6		HORVU7Hr1G066670.6	1533	511 (243-299) (411-468)	3	A0A287WRC2							
HvWRKY_I12	HvWRKY_I12.1	HORVU0Hr1G004890	HORVU0Hr1G004890.1	689	106 (131-188)	-	A0A287DVV3	chrUn 28154305-28157276 (+)	HvWRKY59	Hv.33030	AK376765	BAK07959	MLOC_77883	
	HvWRKY_I12.2		HORVU0Hr1G004890.2	2355	587 (131-188) (518-574) (748-805)	5	A0A287D VW9							
	HvWRKY_I12.3		HORVU0Hr1G004890.3	2382	552 (300-356) (530-552)	4	M0Z6K8							
	HvWRKY_I12.4		HORVU0Hr1G004890.4	2192	530 (300-356)	4	A0A287DVX1							
	HvWRKY_I12.5		HORVU0Hr1G004890.5	2044	558 (300-356) (530-553)	5	A0A287D VW7							
	HvWRKY_I12.6		HORVU0Hr1G004890.6	2040	558 (300-356) (530-553)	5	A0A287D VW7							
	HvWRKY_I12.7		HORVU0Hr1G004890.8	2041	504 (300-356)	5	A0A287D VY0							
	HvWRKY_I12.8		HORVU0Hr1G004890.9	1840	497 (300-356)	3	A0A287DVX0							
	HvWRKY_I12.9		HORVU0Hr1G004890.10	2137	602 (300-356) (530-587)	5	A0A287D VV9							
	HvWRKY_I12.10		HORVU0Hr1G004890.11	2137	452 (150-206) (380-437)	5	A0A287D VW5							
	HvWRKY_I12.11		HORVU0Hr1G004890.12	2135	602 (300-356) (530-587)	5	A0A287D VW1							
	HvWRKY_I12.12		HORVU0Hr1G004890.13	992	82 (-)	1	A0A287D VW8							
	HvWRKY_I12.13		HORVU0Hr1G004890.14	2006	552 (300-356) (530-552)	3	M0Z6K8							
	HvWRKY_I12.14		HORVU0Hr1G004890.15	1870	595 (300-356) (530-587)	5	M0Z6K7							
	HvWRKY_I12.15		HORVU0Hr1G004890.16	1560	497 (300-356)	3	A0A287DVX0							
	HvWRKY_I12.16		HORVU0Hr1G004890.17	1798	599 (312-368) (542-599)	4	A0A287D VW6							
	HvWRKY_I12.17		HORVU0Hr1G004890.18	1558	413 (209-265)	4	A0A287DVX3							
	HvWRKY_I12.18		HORVU0Hr1G004890.19	1021	223 (59-115)	1	A0A287D VW2							
HvWRKY_I1a1	HvWRKY_I1a1.1	HORVU5Hr1G065380	HORVU5Hr1G065380.1	751	63 (-)	1	A0A287RK77	5:500496580-500497191 (-)	HvWRKY67	Hv.28521	EX577594	---	morex_contig_159360_prediction	
	HvWRKY_I1a1.2		HORVU5Hr1G065380.2	662	174 (18-76)	2	A0A287RK14							
HvWRKY_I1a2	HvWRKY_I1a2.1	HORVU5Hr1G065420	HORVU5Hr1G065420.1	1402	331 (172-230)	3	M0WDA0	5:500707238-500708544 (-)	HvWRKY3, HvWRKY52	Hv.13567,Hv.32682	AK359706, AK368514	BAJ90915, BAJ99717	MLOC_4945	
	HvWRKY_I1a2.2		HORVU5Hr1G065420.2	1462	325 (172-219)	2	A0A287RK30							
	HvWRKY_I1a2.3		HORVU5Hr1G065420.3	1345	286 (172-223)	3	A0A287RJV1							
	HvWRKY_I1a2.4		HORVU5Hr1G065420.4	452	68 (-)	1	A0A287RK97							
	HvWRKY_I1a2.5		HORVU5Hr1G065420.5	1284	166 (-)	3	A0A287RK35							
	HvWRKY_I1a2.6		HORVU5Hr1G065420.6	1654	163 (-)	-	A0A287RK18							
	HvWRKY_I1a2.7		HORVU5Hr1G065420.7	1613	139 (-)	1	A0A287RKB6							
	HvWRKY_I1a2.8		HORVU5Hr1G065420.8	1437	314 (155-213)	2	A0A287RJV6							
	HvWRKY_I1a2.9		HORVU5Hr1G065420.9	1457	180 (-)	1	M0WDA1 Q5W1F9							
	HvWRKY_I1a2.10		HORVU5Hr1G065420.10	963	216 (57-115)	4	A0A287RK19							
	HvWRKY_I1a2.11		HORVU5Hr1G065420.11	1029	342 (183-241)	5	A0A287RK02							

	HvWRKY_Ia2.12		HORVU5Hr1G065420.12	836	180 (-)	2	M0WDA1										
	HvWRKY_Ia2.13		HORVU5Hr1G065420.13	582	86 (-)	_	A0A287RJU1										
	HvWRKY_Ia2.14		HORVU5Hr1G065420.14	1267	354 (195-253)	3	A0A287RK87										
	HvWRKY_Ia2.15		HORVU5Hr1G065420.15	1361	391 (194-246)	2	A0A287RK25										
	HvWRKY_Ia2.16		HORVU5Hr1G065420.16	1307	256 (97-155)	2	A0A287RK07										
	HvWRKY_Ia2.17		HORVU5Hr1G065420.17	1516	139 (-)	_	A0A287RKA8										
	HvWRKY_Ia2.18		HORVU5Hr1G065420.18	1209	356 (192-234)	3	A0A287RJU6										
	HvWRKY_Ia2.19		HORVU5Hr1G065420.19	1088	185 (97-150)	4	A0A287RK92										
	HvWRKY_Ia2.20		HORVU5Hr1G065420.20	825	150 (97-150)	2	A0A287RK13										
	HvWRKY_Ia2.21		HORVU5Hr1G065420.21	713	237 (192-237)	3	A0A287RKB1										
HvWRKY_Ia3	HvWRKY_Ia3.1	HORVU6Hr1G028790	HORVU6Hr1G028790.1	2082	353 (195-253)	1	A0A1J0AKY4	6:115445133-115446042 (+)	HvWRKY1/38	Hv.20710	AK360269	BAJ91478	MLOC_60890				
	HvWRKY_Ia3.2		HORVU6Hr1G028790.2	1741	274 (116-174)	_	A0A287TQB0 Q5W1G0										
	HvWRKY_Ia3.3		HORVU6Hr1G028790.3	1066	274 (116-174)	1	A0A287TQB0										
HvWRKY_Ia4	HvWRKY_Ia4.1	HORVU7Hr1G113830	HORVU7Hr1G113830.1	1176	319 (183-241)	1	A0A287XV17	7:638244617-638245682 (+)	HvWRKY2	Hv.13583	AJ853838	CAH68818	---				
	HvWRKY_Ia4.2		HORVU7Hr1G113830.2	1871	206 (-)	_	A0A287XV08										
	HvWRKY_Ia4.3		HORVU7Hr1G113830.3	1259	319 (183-241)	1	A0A287XV78										
	HvWRKY_Ia4.4		HORVU7Hr1G113830.4	1187	182 (-)	1	A0A287XVA5										
HvWRKY_Ia5	HvWRKY_Ia5.1	HORVU7Hr1G113850	HORVU7Hr1G113850.1	1828	254 (-)	_	A0A287XVE6	7:638275299-638276533 (-)	HvWRKY23	Hv.4870	DQ863131	ABI13413	MLOC_70190				
	HvWRKY_Ia5.2		HORVU7Hr1G113850.2	1501	372 (228-286)	1	A0A287XV21										
	HvWRKY_Ia5.3		HORVU7Hr1G113850.3	956	171 (-)	1	A0A287XV14										
	HvWRKY_Ia5.4		HORVU7Hr1G113850.4	1223	406 (262-320)	2	A0A287XV83										
HvWRKY_Iib1	HvWRKY_Iib1.1	HORVU3Hr1G020210	HORVU3Hr1G020210.1	2277	494 (241-299)	3	A0A287KCW4	3:62170393-62171085 (-)	HvWRKY37	Hv.19834	AK368042	BAJ992451	MLOC_7939				
	HvWRKY_Iib1.2		HORVU3Hr1G020210.2	2752	526 (273-331)	2	A0A287KCY9										
	HvWRKY_Iib1.3		HORVU3Hr1G020210.3	1972	279 (-)	2	A0A287KCQ0										
	HvWRKY_Iib1.4		HORVU3Hr1G020210.4	1458	485 (232-290)	3	A0A287KCQ2										
HvWRKY_Iib2	HvWRKY_Iib2.1	HORVU3Hr1G033740	HORVU3Hr1G033740.1	1463	205 (-)	_	M0YE08	3:178817922-178819144 (-)	HvWRKY47	Hv.4932	AK364800	BAJ96003	MLOC_68299				
	HvWRKY_Iib2.2		HORVU3Hr1G033740.2	2498	629 (361-419)	5	A0A287KQ18										
	HvWRKY_Iib2.3		HORVU3Hr1G033740.3	2499	457 (189-247)	5	A0A287KPZ7										
	HvWRKY_Iib2.4		HORVU3Hr1G033740.4	2486	380 (-)	3	A0A287KQ12										
	HvWRKY_Iib2.5		HORVU3Hr1G033740.5	2557	365(301-353)	4	M0YE10										
	HvWRKY_Iib2.6		HORVU3Hr1G033740.6	2426	569 (301-359)	5	M0YE09										
	HvWRKY_Iib2.7		HORVU3Hr1G033740.7	2262	363 (-)	4	A0A287KQ23										
	HvWRKY_Iib2.8		HORVU3Hr1G033740.8	2235	569 (301-359)	5	A0A287KQ01										
	HvWRKY_Iib2.9		HORVU3Hr1G033740.9	1664	205 (-)	1	M0YE08										
	HvWRKY_Iib2.10		HORVU3Hr1G033740.10	1450	391 (-)	4	A0A287KQ05										
	HvWRKY_Iib2.11		HORVU3Hr1G033740.11	1679	457 (189-247)	5	A0A287KPZ3										
	HvWRKY_Iib2.12		HORVU3Hr1G033740.12	1868	621 (353-411)	5	A0A287KPZ0										
HvWRKY_Iib3	HvWRKY_Iib3.1	HORVU6Hr1G079710	HORVU6Hr1G079710.1	2149	619 (374-432)	4	A0A287UUY4	6:538586979-538587561 (+)	HvWRKY66	Hv.37042	AK363247	BAJ94451	MLOC_71463				
	HvWRKY_Iib3.2		HORVU6Hr1G079710.2	2152	620 (374-433)	4	A0A287UVG1										
HvWRKY_Iib4	HvWRKY_Iib4.1	HORVU7Hr1G021260	HORVU7Hr1G021260.1	2402	609 (232-290)	4	M0XI79	7:30021286-30022700 (-)	HvWRKY60	---	AK248555	---	MLOC_60283				
	HvWRKY_Iib4.2		HORVU7Hr1G021260.2	1873	598 (221-279)	3	A0A287VMI6										
	HvWRKY_Iib4.3		HORVU7Hr1G021260.3	1822	606 (229-287)	4	A0A287VML0										
	HvWRKY_Iib4.4		HORVU7Hr1G021260.4	1375	218 (-)	3	A0A287VMI3										
	HvWRKY_Iib4.5		HORVU7Hr1G021260.5	572	75 (-)	_	A0A287VMJ0										
	HvWRKY_Iib4.6		HORVU7Hr1G021260.6	1485	276 (232-276)	3	A0A287VN06										
HvWRKY_Iib5	HvWRKY_Iib5	---	---	---	499 (335-393)	---	---	---	---	---	---	---	morex_contig_2548928_prediction				
HvWRKY_Iic1	HvWRKY_Iic1.1	HORVU1Hr1G027700	HORVU1Hr1G027700.1	1319	199 (109-166)	_	F2CZY9	1:143405756-143406352	HvWRKY17	Hv.29828	AK367065	BAJ98268	MLOC_12079				

	HvWRKY_IIC1.2		HORVU1Hr1G027700.2	550	132 (-)	1	A0A287EVS9	(+)							
	HvWRKY_IIC1.3		HORVU1Hr1G027700.3	466	155 (85-142)	2	A0A287EZV6								
HvWRKY_IIC2	HvWRKY_IIC2.1	HORVU1Hr1G080300	HORVU1Hr1G080300.1	1260	279 (192-249)	1	A0A287GFN9 B2KJ63	1:524846306-524846771 (+)	HvWRKY20	Hv.29796	AK363451	BAJ94655	MLOC_10264		
	HvWRKY_IIC2.2		HORVU1Hr1G080300.2	1496	221 (192-216)	-	A0A287GFN6								
	HvWRKY_IIC2.3		HORVU1Hr1G080300.3	1251	265 (178-235)	1	A0A287GFM4								
	HvWRKY_IIC2.4		HORVU1Hr1G080300.4	1191	254 (167-224)	1	A0A287GFN2								
	HvWRKY_IIC2.5		HORVU1Hr1G080300.5	716	128 (12-34)	1	A0A287GFM3								
HvWRKY_IIC3	HvWRKY_IIC3.1	HORVU1Hr1G081570	HORVU1Hr1G081570.1	1151	306 (228-285)	1	A0A287GH73	1:527977464-527979608 (-)	HvWRKY13	Hv.18628	DQ840412	ABI13379	MLOC_32433		
	HvWRKY_IIC3.2		HORVU1Hr1G081570.2	544	180 (102-159)	2	A0A287GH70								
	HvWRKY_IIC3.3		HORVU1Hr1G081570.3	345	35 (-)	-	A0A287GH69								
	HvWRKY_IIC3.4		HORVU1Hr1G081570.4	1281	266 (235-262)	-	A0A287GH71								
HvWRKY_IIC4	HvWRKY_IIC4.1	HORVU1Hr1G088300	HORVU1Hr1G088300.1	1391	288 (82-139)	2	A0A287GMI0	1:541487210-541487556 (+)	HvWRKY69	Hv.31601	GH227897	---	---		
	HvWRKY_IIC4.2		HORVU1Hr1G088300.2	1112	287 (81-138)	2	A0A287GME3								
	HvWRKY_IIC4.3		HORVU1Hr1G088300.3	305	101 (78-100)	1	A0A287GMF4								
HvWRKY_IIC5	HvWRKY_IIC5.1	HORVU1Hr1G092130	HORVU1Hr1G092130.1	1792	309 (167-224)	2	A0A287GR86	1:549784360-549784659 (+)	HvWRKY56	Hv.33326	AK367216	BAJ98419	---		
	HvWRKY_IIC5.2		HORVU1Hr1G092130.2	1584	217 (167-189)	2	A0A287GR48								
	HvWRKY_IIC5.3		HORVU1Hr1G092130.3	1326	225 (167-204)	1	A0A287GR79								
	HvWRKY_IIC5.4		HORVU1Hr1G092130.4	1265	309 (167-224)	2	A0A287GR86								
	HvWRKY_IIC5.5		HORVU1Hr1G092130.5	1321	308 (167-223)	2	A0A287GR60								
	HvWRKY_IIC5.6		HORVU1Hr1G092130.6	1264	180 (38-95)	1	A0A287GR36								
	HvWRKY_IIC5.7		HORVU1Hr1G092130.7	1263	309 (167-224)	2	A0A287GR53								
	HvWRKY_IIC5.8		HORVU1Hr1G092130.8	1023	100 (-)	2	A0A287GR84								
	HvWRKY_IIC5.9		HORVU1Hr1G092130.9	950	102 (-)	2	A0A287GR91								
	HvWRKY_IIC5.10		HORVU1Hr1G092130.10	1054	85 (-)	1	A0A287GR31								
HvWRKY_IIC6	HvWRKY_IIC6.1	HORVU2Hr1G001780	HORVU2Hr1G001780.1	1190	196 (104-161)	1	M0VRK2	2:3724764-3728980 (+)	HvWRKY12	Hv.14881	AK354853	BAJ86072	MLOC_36657		
	HvWRKY_IIC6.2		HORVU2Hr1G001780.2	641	122 (-)	2	A0A287GW94								
	HvWRKY_IIC6.3		HORVU2Hr1G001780.3	783	133 (104-128)	-	M0VRK3								
	HvWRKY_IIC6.4		HORVU2Hr1G001780.4	1210	60 (-)	-	A0A287GW87								
HvWRKY_IIC7	HvWRKY_IIC7.1	HORVU2Hr1G093350	HORVU2Hr1G093350.1	1096	178 (153-176)	2	A0A287IZ94	2:657823132-657826763 (+)	HvWRKY68	---	EX585854	---	MLOC_66345		
	HvWRKY_IIC7.2		HORVU2Hr1G093350.2	1365	133 (-)	2	A0A287IZ59								
	HvWRKY_IIC7.3		HORVU2Hr1G093350.3	1175	230 (153-210)	3	A0A287IZ53								
	HvWRKY_IIC7.4		HORVU2Hr1G093350.4	603	121 (-)	1	A0A287IZ92								
	HvWRKY_IIC7.5		HORVU2Hr1G093350.5	999	161 (95-141)	2	A0A287IZC8								
	HvWRKY_IIC7.6		HORVU2Hr1G093350.6	799	151 (74-131)	3	A0A287IZ99								
	HvWRKY_IIC7.7		HORVU2Hr1G093350.7	425	140 (63-120)	3	A0A287IZ63								
	HvWRKY_IIC7.8		HORVU2Hr1G093350.8	394	101 (24-81)	2	A0A287IZ58								
HvWRKY_IIC7.9	HORVU2Hr1G093350.9	527	97 (24-81)	2	A0A287IZ98										
HvWRKY_IIC8	HvWRKY_IIC8.1	HORVU3Hr1G020140	HORVU3Hr1G020140.1	1269	246 (148-205)	-	A0A287KCP4	3:61369784-61370128 (-)	HvWRKY63	Hv.33964	AK361512	---	---		
	HvWRKY_IIC8.2		HORVU3Hr1G020140.2	650	201 (103-160)	1	A0A287KCU7								
	HvWRKY_IIC8.3		HORVU3Hr1G020140.3	583	119 (21-78)	1	A0A287KCX3								
HvWRKY_IIC9	HvWRKY_IIC9.1	HORVU3Hr1G021120	HORVU3Hr1G021120.1	1372	264 (188-245)	2	A0A287KDF1	3:67267481-67272079 (+)	HvWRKY14	Hv.29823	DQ840413	ABI13380	---		
	HvWRKY_IIC9.2		HORVU3Hr1G021120.2	1510	264 (188-245)	2	A0A287KDF1								
	HvWRKY_IIC9.3		HORVU3Hr1G021120.3	651	208 (188-208)	1	A0A287KDE7								
	HvWRKY_IIC9.4		HORVU3Hr1G021120.4	695	231 (197-231)	2	A0A287KDF0								
	HvWRKY_IIC9.5		HORVU3Hr1G021120.5	1258	192 (116-173)	2	A0A287KDK1								
	HvWRKY_IIC9.6		HORVU3Hr1G021120.6	444	147 (71-128)	3	A0A287KDM3								
HvWRKY_IIC10	HvWRKY_IIC10.1	HORVU3Hr1G050590	HORVU3Hr1G050590.1	1173	109 (1-46)	2	A0A287L0P6	3:362933096-362933996 (+)	HvWRKY5	Hv.22109	AJ853841	CAH68821	MLOC_66204		
	HvWRKY_IIC10.2		HORVU3Hr1G050590.2	1173	237 (117-174)	2	F2D3A5 Q5W1F7								
	HvWRKY_IIC10.3		HORVU3Hr1G050590.3	1260	266 (117-146) (157-	1	A0A287L0P5								

					203)												
	HvWRKY_IIC10.4		HORVU3Hr1G050590.4	1095	109 (1- 46)	2	A0A287L0P6										
	HvWRKY_IIC10.5		HORVU3Hr1G050590.5	580	147 (117-139)	2	A0A287L0P0										
	HvWRKY_IIC10.6		HORVU3Hr1G050590.6	567	168 (136-158)	2	A0A287L0Q3										
	HvWRKY_IIC10.7		HORVU3Hr1G050590.7	584	154 (43-100)	2	A0A287L0R1										
	HvWRKY_IIC10.8		HORVU3Hr1G050590.8	492	164 (83-140)	2	A0A287L0Q1										
HvWRKY_IIC11	HvWRKY_IIC11.1	HORVU3Hr1G060500	HORVU3Hr1G060500.1	4876	364 (168- 225)	2	F2D2E5	3:460764371-460764703 (-)	HvWRKY51	Hv.16746	AK366837	BAJ98040	MLOC_54606				
	HvWRKY_IIC11.2		HORVU3Hr1G060500.2	3836	206 (10-67)	1	A0A287L986										
	HvWRKY_IIC11.3		HORVU3Hr1G060500.3	4009	208 (24-69)	-	A0A287L984										
	HvWRKY_IIC11.4		HORVU3Hr1G060500.4	1979	206 (10-67)	1	A0A287L986										
	HvWRKY_IIC11.5		HORVU3Hr1G060500.5	1880	208 (24-69)	1	A0A287L984										
	HvWRKY_IIC11.6		HORVU3Hr1G060500.6	1703	364 (168-225)	2	A0A287L992										
	HvWRKY_IIC11.7		HORVU3Hr1G060500.8	1092	363 (167-224)	2	A0A287L9A2										
	HvWRKY_IIC11.8		HORVU3Hr1G060500.9	730	128 (35-92)	2	A0A287L989										
	HvWRKY_IIC11.9		HORVU3Hr1G060500.10	1160	42 (10-42)	1	A0A287L987										
HvWRKY_IIC12	HvWRKY_IIC12.1	HORVU3Hr1G067510	HORVU3Hr1G067510.1	856	212 (128-185)	2	A0A287LGN9	3:512943061-512945245 (+)	HvWRKY18	Hv.29775	DQ840417	ABI13384	---				
	HvWRKY_IIC12.2		HORVU3Hr1G067510.2	516	118 (-)	2	A0A287LGJ9										
	HvWRKY_IIC12.3		HORVU3Hr1G067510.3	516	117 (33-90)	2	A0A287LGL2										
	HvWRKY_IIC12.4		HORVU3Hr1G067510.4	508	166 (82-139)	2	A0A287LGK7										
	HvWRKY_IIC12.5		HORVU3Hr1G067510.5	427	54 (1-27)	-	A0A287LGL0										
HvWRKY_IIC13	HvWRKY_IIC13.1	HORVU3Hr1G069660	HORVU3Hr1G069660.1	1193	231 (153-210)	1	M0WVB2	3:527941054-527946266 (+)	---	---	---	---	MLOC_54950				
	HvWRKY_IIC13.2		HORVU3Hr1G069660.2	597	197 (148-173)	-	A0A287LIP6										
HvWRKY_IIC14	HvWRKY_IIC14.1	HORVU3Hr1G086180	HORVU3Hr1G086180.1	1142	229 (168-225)	2	-	3:615953913-615954074 (-)	HvWRKY36	Hv.29825	DQ863130	ABI13412	MLOC_19031				
	HvWRKY_IIC14.2		HORVU3Hr1G086180.2	934	94 (33-90)	2	-										
HvWRKY_IIC15	HvWRKY_IIC15.1	HORVU3Hr1G115180	HORVU3Hr1G115180.1	1684	384 (152- 209)	2	A0A287MSQ6	3:692833232-692834631 (-)	HvWRKY76	---	---	---	MLOC_7470				
	HvWRKY_IIC15.2		HORVU3Hr1G115180.2	1541	384 (152- 209)	2	A0A287MSQ4										
	HvWRKY_IIC15.3		HORVU3Hr1G115180.3	882	239 (75-132)	3	A0A287MSN2 B2KJ86										
	HvWRKY_IIC15.4		HORVU3Hr1G115180.4	1059	172 (152-172)	1	A0A287MSQ5										
HvWRKY_IIC16	HvWRKY_IIC16.1	HORVU4Hr1G002390	HORVU4Hr1G002390.1	1083	80 (42-67)	1	A0A287MXE2	4:4364442-4365239 (+)	HvWRKY48	---	JQ806389	AFV67804	MLOC_16746				
	HvWRKY_IIC16.2		HORVU4Hr1G002390.2	1401	97 (3-59)	1	A0A287MXE3										
	HvWRKY_IIC16.3		HORVU4Hr1G002390.3	966	136 (42-98)	2	A0A287MXE0 K7R129										
	HvWRKY_IIC16.4		HORVU4Hr1G002390.4	1454	41 (3-32)	-	A0A287MXE1										
	HvWRKY_IIC16.5		HORVU4Hr1G002390.5	444	147 (53-109)	2	A0A287MXD9										
	HvWRKY_IIC16.6		HORVU4Hr1G002390.6	403	134 (42-98)	2	A0A287MXE4										
HvWRKY_IIC17	HvWRKY_IIC17.1	HORVU5Hr1G096420	HORVU5Hr1G096420.1	1550	200 (33-90)	3	M0XDZ9	5:601272075-601273213 (-)	HvWRKY15	Hv.15485	AK370299	BAK01500	MLOC_59259				
	HvWRKY_IIC17.2		HORVU5Hr1G096420.2	1755	248 (81-138)	2	M0XDZ7										
	HvWRKY_IIC17.3		HORVU5Hr1G096420.3	1173	217 (46-103)	3	A0A287SE70										
	HvWRKY_IIC17.4		HORVU5Hr1G096420.4	1202	214 (47-104)	3	A0A287SE53										
	HvWRKY_IIC17.5		HORVU5Hr1G096420.5	1203	214 (47-104)	3	A0A287SE53										
	HvWRKY_IIC17.6		HORVU5Hr1G096420.6	1175	218 (47-104)	-	A0A287SEB3										
	HvWRKY_IIC17.7		HORVU5Hr1G096420.7	1737	248 (81-138)	2	M0XDZ7										
	HvWRKY_IIC17.8		HORVU5Hr1G096420.8	1175	209 (42-99)	3	A0A287SE75										
	HvWRKY_IIC17.9		HORVU5Hr1G096420.9	1148	213 (42-99)	3	A0A287SE58										
	HvWRKY_IIC17.10		HORVU5Hr1G096420.10	1130	211 (44-101)	3	A0A287SE98										
	HvWRKY_IIC17.11		HORVU5Hr1G096420.11	1142	215 (48-105)	3	A0A287SE82										
	HvWRKY_IIC17.12		HORVU5Hr1G096420.12	1602	252 (81-138 )	2	A0A287SE60										
	HvWRKY_IIC17.13		HORVU5Hr1G096420.13	1329	200 (33-90)	3	M0XDZ9										
	HvWRKY_IIC17.14		HORVU5Hr1G096420.14	1317	200 (33-90)	2	M0XDZ9										
	HvWRKY_IIC17.15		HORVU5Hr1G096420.15	987	218 (51-108)	2	A0A287SEA3										

	HvWRKY_IIC17.16		HORVU5Hr1G096420.16	1500	248 (81-138)	1	M0XDZ7								
	HvWRKY_IIC17.17		HORVU5Hr1G096420.17	904	215 (48-105)	2	A0A287SE65								
	HvWRKY_IIC17.18		HORVU5Hr1G096420.18	764	214 (47-104)	2	A0A287SE53								
	HvWRKY_IIC17.19		HORVU5Hr1G096420.19	630	209 (42-99)	2	A0A287SE36								
	HvWRKY_IIC17.20		HORVU5Hr1G096420.20	911	302 (135-192)	-	A0A287SE92								
HvWRKY_IIC18	HvWRKY_IIC18.1	HORVU6Hr1G061940	HORVU6Hr1G061940.1	1251	227 (153-210)	3	A0A287UED9	6:414352248-414354771 (-)	HvWRKY75	---	---	---	---	MLOC_12078	
	HvWRKY_IIC18.2		HORVU6Hr1G061940.3	1257	109 (-)	2	A0A287UDY9								
	HvWRKY_IIC18.3		HORVU6Hr1G061940.4	453	141 (67-124)	3	A0A287UE00								
	HvWRKY_IIC18.4		HORVU6Hr1G061940.5	578	98 (24-81)	2	A0A287UDT7								
	HvWRKY_IIC18.5		HORVU6Hr1G061940.6	510	151 (77-134)	2	A0A287UEE4								
	HvWRKY_IIC18.6		HORVU6Hr1G061940.7	461	140 (67-124)	2	A0A287UE01								
	HvWRKY_IIC18.7		HORVU6Hr1G061940.8	902	109 (-)	1	A0A287UDY9								
	HvWRKY_IIC18.8		HORVU6Hr1G061940.9	725	118 (-)	2	A0A287UE05								
HvWRKY_IIC19	HvWRKY_IIC19.1	HORVU0Hr1G001430	HORVU0Hr1G001430.1	1430	218 (131-188)	1	M0ZBS0	chrUn 7503946-7504149 (+)	HvWRKY19	Hv.15087	DQ840418	ABI13385	MLOC_81131		
	HvWRKY_IIC19.2		HORVU0Hr1G001430.2	1043	176 (-)	-	A0A287DUC3								
HvWRKY_IIC20	HvWRKY_IIC20.1	HORVU0Hr1G003340	HORVU0Hr1G003340.1	1508	285 (127-184)	2	M0X924	chrUn 13730839-13732710 (-)	HvWRKY79	---	---	---	MLOC_58026		
	HvWRKY_IIC20.2		HORVU0Hr1G003340.2	1371	285 (127-184)	2	A0A287DVC1								
	HvWRKY_IIC20.3		HORVU0Hr1G003340.4	922	193 (35-92)	1	A0A287DVB2								
	HvWRKY_IIC20.4		HORVU0Hr1G003340.5	933	85 (-)	2	A0A287DVB3								
	HvWRKY_IIC20.5		HORVU0Hr1G003340.6	1897	199 (41-98)	1	M0X925								
	HvWRKY_IIC20.6		HORVU0Hr1G003340.7	921	195 (37-94)	2	A0A287DVC6								
	HvWRKY_IIC20.7		HORVU0Hr1G003340.8	1264	149 (5-48)	-	A0A287DVC5								
	HvWRKY_IIC20.8		HORVU0Hr1G003340.9	1302	159 (127-149)	2	A0A287DVB7								
	HvWRKY_IIC20.9		HORVU0Hr1G003340.10	1125	182 (24-81)	2	M0X923								
	HvWRKY_IIC20.10		HORVU0Hr1G003340.11	1014	85 (-)	1	A0A287DVB3								
	HvWRKY_IIC20.11		HORVU0Hr1G003340.12	831	85 (-)	2	A0A287DVB3								
	HvWRKY_IIC20.12		HORVU0Hr1G003340.13	657	218 (60-117)	2	A0A287DVA8								
	HvWRKY_IIC20.13		HORVU0Hr1G003340.14	640	91 (-)	-	A0A287DVB4								
	HvWRKY_IIC21		HvWRKY_IIC21.1	---	---	---	197 (55-112)							---	---
HvWRKY_IIC21.2		177 (35- 92)	---				---								
HvWRKY_IIC22	HvWRKY_IIC22	---	---	---	169 (114-169)	---	---	---	HvWRKY16	Hv.29833	DQ840415	ABI13382	---		
HvWRKY_IId1	HvWRKY_IId1.1	HORVU2Hr1G065750	HORVU2Hr1G065750.1	875	234 (214-234)	3	A0A287I911	2:452962746-453094165 (+)	HvWRKY10	Hv.7458	AK365947	BAJ97150	MLOC_63184		
	HvWRKY_IId1.2		HORVU2Hr1G065750.2	1211	249 (178-236)	2	A0A287I8W1								
	HvWRKY_IId1.3		HORVU2Hr1G065750.3	1533	249 (178- 236)	2	A0A287I8W1								
HvWRKY_IId2	HvWRKY_IId2.1	HORVU2Hr1G101100	HORVU2Hr1G101100.1	1191	180 (87-145)	1	A0A287J716	2:692833294-692833754 (+)	HvWRKY7	Hv.10971	AK371958	BAK03156	MLOC_22106		
	HvWRKY_IId2.2		HORVU2Hr1G101100.2	959	180 (87-145)	2	A0A287J716								
	HvWRKY_IId2.3		HORVU2Hr1G101100.3	1370	186 (-)	-	A0A287J6V7								
HvWRKY_IId3	HvWRKY_IId3.1	HORVU3Hr1G069320	HORVU3Hr1G069320.1	2078	119 (74-114)	-	A0A287LIK2	3:525869455-525870536 (+)	HvWRKY45	Hv.18266	DQ863128	ABI13410	MLOC_14821		
	HvWRKY_IId3.2		HORVU3Hr1G069320.2	1908	100 (74-96)	1	A0A287LIJ8								
	HvWRKY_IId3.3		HORVU3Hr1G069320.3	1907	297 (74-132)	1	M0UVY2								
	HvWRKY_IId3.4		HORVU3Hr1G069320.4	1787	177 (74- 96)	1	A0A287LIJ5								
	HvWRKY_IId3.5		HORVU3Hr1G069320.6	1533	207 (74-96)	1	A0A287LIK7								
	HvWRKY_IId3.6		HORVU3Hr1G069320.5	1465	100 (1-42)	1	A0A287LIJ8								
HvWRKY_IId4	HvWRKY_IId4.1	HORVU3Hr1G071750	HORVU3Hr1G071750.1	1722	281 (79-137)	1	A0A287LLA5	3:542308206-542308682 (-)	HvWRKY39	Hv.16074	DQ863122	ABI13404	MLOC_69778		
	HvWRKY_IId4.2		HORVU3Hr1G071750.2	2041	75 (-)	-	A0A287LL73								
	HvWRKY_IId4.3		HORVU3Hr1G071750.3	1503	281 (79-137)	1	A0A287LLA5								
	HvWRKY_IId4.4		HORVU3Hr1G071750.4	751	199 (10-55)	1	A0A287LL80								
	HvWRKY_IId4.5		HORVU3Hr1G071750.5	850	237 (35-93)	1	A0A287LL83								
	HvWRKY_IId4.6		HORVU3Hr1G071750.6	1665	99 (79-99)	1	M0YIV7								

	HvWRKY_IId4.7		HORVU3Hr1G071750.7	1823	242 (40-98)	1	A0A287LL77							
HvWRKY_IId5	HvWRKY_IId5	HORVU3Hr1G097420	HORVU3Hr1G097420.1	1079	319 (289-313)	1	A0A287MFZ8	3:655712201-655712581 (+)	HvWRKY8, HvWRKY56	Hv.29784	AK374747, DQ840407	BAK05943	MLOC_56247	
HvWRKY_IId6	HvWRKY_IId6.1	HORVU4Hr1G011590	HORVU4Hr1G011590.1	1654	348 (-)	2	A0A287N7T4	4:36195238-36197138 (+)	HvWRKY58	Hv.26258	AK354776	BAJ85995	MLOC_77258	
	HvWRKY_IId6.2		HORVU4Hr1G011590.2	1682	412 (345-403)	3	A0A287N837							
	HvWRKY_IId6.3		HORVU4Hr1G011590.3	1680	407 (340-398)	3	A0A287N7Z4							
	HvWRKY_IId6.4		HORVU4Hr1G011590.4	2017	340 (273-331)	2	F2CT24							
	HvWRKY_IId6.5		HORVU4Hr1G011590.5	1835	341 (274-332)	2	M0Z521							
	HvWRKY_IId6.6		HORVU4Hr1G011590.6	1708	251 (-)	1	M0Z520							
	HvWRKY_IId6.7		HORVU4Hr1G011590.7	2768	251 (-)	_	M0Z520							
	HvWRKY_IId6.8		HORVU4Hr1G011590.8	1025	76 (-)	1	A0A287N7Z9							
	HvWRKY_IId6.9		HORVU4Hr1G011590.9	1037	343 (275-331)	3	A0A287N7R2							
	HvWRKY_IId6.10		HORVU4Hr1G011590.10	1062	353 (274-322)	1	F2DZN8							
HvWRKY_IId7	HvWRKY_IId7	HORVU5Hr1G015120	HORVU5Hr1G015120.1	1536	302 (237-294)	_	A0A287QF14	5:56772656-56773192 (-)	HvWRKY94	---	---	---	MLOC_22356	
HvWRKY_IId8	HvWRKY_IId8.1	HORVU5Hr1G092770	HORVU5Hr1G092770.1	1796	280 (-)	_	A0A287S992	5:589215967-589216209 (-)	HvWRKY77	---	---	---	MLOC_66612	
	HvWRKY_IId8.2		HORVU5Hr1G092770.2	900	299 (233-291)	_	A0A287S9D1							
HvWRKY_IId9	HvWRKY_IId9.1	HORVU5Hr1G094050	HORVU5Hr1G094050.1	2308	395 (329-387)	2	M0Z3L2	5:593673873-593674190 (-)	HvWRKY9	Hv.17161	DQ840408	ABI13375	MLOC_76441	
	HvWRKY_IId9.2		HORVU5Hr1G094050.2	1915	309 (-)	2	A0A287SB73							
	HvWRKY_IId9.3		HORVU5Hr1G094050.3	1777	328 (-)	1	A0A287SB30							
	HvWRKY_IId9.4		HORVU5Hr1G094050.4	1696	395 (329-387)	2	M0Z3L2							
	HvWRKY_IId9.5		HORVU5Hr1G094050.5	1646	395 (329-387)	2	M0Z3L2							
	HvWRKY_IId9.6		HORVU5Hr1G094050.6	2123	395 (329-387)	3	M0Z3L2							
	HvWRKY_IId9.7		HORVU5Hr1G094050.7	1947	395 (329-387)	4	M0Z3L2							
	HvWRKY_IId9.8		HORVU5Hr1G094050.8	2030	395 (329-387)	3	M0Z3L2							
	HvWRKY_IId9.9		HORVU5Hr1G094050.9	1597	383 (329-350)	1	A0A287SB27							
HvWRKY_IId10	HvWRKY_IId10.1	HORVU5Hr1G106570	HORVU5Hr1G106570.1	2286	383 (-)	1	A0A287SMG6	5:624440671-624441629 (+)	HvWRKY11	Hv.15434	AK370043	BAK01244	MLOC_67268	
	HvWRKY_IId10.2		HORVU5Hr1G106570.2	2188	452 (380-438)	2	F2E1M2							
	HvWRKY_IId10.3		HORVU5Hr1G106570.3	1656	492 (420-478)	3	A0A287SME8							
	HvWRKY_IId10.4		HORVU5Hr1G106570.4	1149	380 (308-366)	4	A0A287SMH1							
	HvWRKY_IId10.5		HORVU5Hr1G106570.5	1401	393 (321-379)	2	A0A287SMC0							
	HvWRKY_IId10.6		HORVU5Hr1G106570.7	1444	397 (317-347)	2	A0A287SMG0							
	HvWRKY_IId10.7		HORVU5Hr1G106570.8	1443	389 (317-375)	2	A0A287SMF2							
	HvWRKY_IId10.8		HORVU5Hr1G106570.9	532	147 (-)	2	A0A287SMH6							
	HvWRKY_IId10.9		HORVU5Hr1G106570.10	712	85 (13-71)	1	M0YAF1							
			HvWRKY_IId10.10		HORVU5Hr1G106570.11	722	64 (5-50)							_
HvWRKY_IId11	HvWRKY_IId11.1	HORVU1Hr1G051260	HORVU1Hr1G051260.1	1465	340 (182-240)	1	M0YPH1	1:380277335-380277985 (-)	HvWRKY74	---	---	---	MLOC_71477	
	HvWRKY_IId11.2		HORVU1Hr1G051260.3	1548	375 (217-275)	_	A0A287FJF1							
HvWRKY_IId12	HvWRKY_IId12.1	HORVU1Hr1G092360	HORVU1Hr1G092360.1	947	268 (130-188)	1	A0A287GRE1	1:550471301-550472022 (+)	HvWRKY91	---	---	---	morex_contig_1579054_prediction	
	HvWRKY_IId12.2		HORVU1Hr1G092360.2	990	141 (121-141)	_	A0A287GRF8							
HvWRKY_IId13	HvWRKY_IId13.1	HORVU2Hr1G102740	HORVU2Hr1G102740.1	1107	257 (5-47)	_	A0A287J8N9	2:697857709-697864484 (-)	HvWRKY54	---	AK368994	BAK00197	---	
	HvWRKY_IId13.2		HORVU2Hr1G102740.2	1255	265 (6-55)	2	A0A287J8G4							
	HvWRKY_IId13.3		HORVU2Hr1G102740.3	1254	312 (44-102)	2	-							
	HvWRKY_IId13.4		HORVU2Hr1G102740.4	1043	255 (4-45)	1	A0A287J8C7							
	HvWRKY_IId13.5		HORVU2Hr1G102740.5	1202	312 (44-102)	2	-							
	HvWRKY_IId13.6		HORVU2Hr1G102740.6	1181	311 (43-101)	2	A0A287J8P4							
	HvWRKY_IId13.7		HORVU2Hr1G102740.7	927	222 (-)	2	A0A287J8H1							
HvWRKY_IId14	HvWRKY_IId14.1	HORVU3Hr1G055910	HORVU3Hr1G055910.1	2361	177 (157-177)	1	A0A287L4R2	3:417326879-417328397 (+)	HvWRKY64	Hv.33406	AK368513	BAJ99716	MLOC_7126	
	HvWRKY_IId14.2		HORVU3Hr1G055910.2	2473	144 (-)	_	A0A287L4Q4							
	HvWRKY_IId14.3		HORVU3Hr1G055910.3	1644	318 (157-215)	2	A0A287L4P5							

	HvWRKY_Ile4.4		HORVU3Hr1G055910.4	1644	318 (157- 215)	2	A0A287L4Q7								
	HvWRKY_Ile4.5		HORVU3Hr1G055910.5	6211	442 (281-339)	2	A0A287L4P4								
	HvWRKY_Ile4.6		HORVU3Hr1G055910.6	2078	279 (259-279)	1	A0A287L4R5								
	HvWRKY_Ile4.7		HORVU3Hr1G055910.7	5220	179 (-)	1	A0A287L4R1								
	HvWRKY_Ile4.8		HORVU3Hr1G055910.8	4391	134 (1-31)	-	M0YNS5								
HvWRKY_Ile5	HvWRKY_Ile5.1	HORVU4Hr1G082550	HORVU4Hr1G082550.1	737	245 (160-218)	2	A0A287PVK5	4:622602772- 622603127 (-)	HvWRKY81	---	---	---	---	---	MLOC_56822
	HvWRKY_Ile5.2		HORVU4Hr1G082550.2	740	246 (161-219)	2	A0A287PW11								
HvWRKY_Ile6	HvWRKY_Ile6.1	HORVU5Hr1G124320	HORVU5Hr1G124320.1	1687	354 (173-231)	2	A0A287T1F4	5:665874070-665877100 (-)	HvWRKY73	---	---	---	---	---	MLOC_58349
	HvWRKY_Ile6.2		HORVU5Hr1G124320.2	1419	195 (14-72)	1	M0XAD8								
	HvWRKY_Ile6.3		HORVU5Hr1G124320.3	1769	354 (173-231)	2	M0XAD7								
	HvWRKY_Ile6.4		HORVU5Hr1G124320.4	735	172 (3-49)	1	A0A287T1M7								
	HvWRKY_Ile6.5		HORVU5Hr1G124320.5	748	177 (9-54)	1	A0A287T1G5								
	HvWRKY_Ile6.6		HORVU5Hr1G124320.6	1034	195 (14-72)	2	M0XAD8								
	HvWRKY_Ile6.7		HORVU5Hr1G124320.7	1512	353 (172-230)	2	A0A287T1K4								
	HvWRKY_Ile6.8		HORVU5Hr1G124320.8	1518	354 (173-231)	2	M0XAD7								
	HvWRKY_Ile6.9	HORVU5Hr1G124320.9	1612	354 (173-231)	2	M0XAD7									
HvWRKY_Ile7	HvWRKY_Ile7.1	HORVU6Hr1G067680	HORVU6Hr1G067680.1	639	115 (-)	-	A0A287UII9	6:469691556-469691936 (-)	---	Hv.33156	AK372278	BAK03476	---	---	MLOC_64446
	HvWRKY_Ile7.2		HORVU6Hr1G067680.2	1624	208 (-)	1	M0XZJ6								
	HvWRKY_Ile7.3		HORVU6Hr1G067680.3	1954	391 (39-96)	3	A0A287UIT9								
	HvWRKY_Ile7.4		HORVU6Hr1G067680.4	762	171 (-)	3	A0A287UIH5								
	HvWRKY_Ile7.5		HORVU6Hr1G067680.5	875	80 (-)	-	A0A287UIJ2								
HvWRKY_Ile8	HvWRKY_Ile8.1	HORVU7Hr1G080950	HORVU7Hr1G080950.1	1910	407 (212-271)	1	A0A287X2M5	7:480934224-480934765 (-)	HvWRKY44	Hv.29819	DQ863129	ABI13411	---	---	MLOC_58423
	HvWRKY_Ile8.2		HORVU7Hr1G080950.2	1941	357 (162-221)	1	A0A287X2J2								
	HvWRKY_Ile8.3		HORVU7Hr1G080950.3	1484	160 (-)	-	A0A287X2B0								
	HvWRKY_Ile8.4		HORVU7Hr1G080950.4	1648	357 (162-221)	1	A0A287X2D8								
	HvWRKY_Ile8.5		HORVU7Hr1G080950.5	667	209 (-)	-	A0A287X2P7								
HvWRKY_III1	HvWRKY_III1	HORVU1Hr1G069610	HORVU1Hr1G069610.1	870	289 (135-196)	2	M0UHX5	1:486434521-486437511 (+)	HvWRKY84						MLOC_11088
HvWRKY_III2	HvWRKY_III2.1	HORVU1Hr1G069620	HORVU1Hr1G069620.1	1773	214 (19-79)	1	A0A287G3P1	1:486468236-486654723 (+)	HvWRKY95, HvWRKY31	Hv.29798	DQ863115	ABI13397	---	---	MLOC_15430, MLOC_5971
	HvWRKY_III2.2		HORVU1Hr1G069620.2	1762	215 (19-79)	-	M0XG05								
	HvWRKY_III2.3		HORVU1Hr1G069620.3	1235	215 (19-79)	1	M0XG05								
	HvWRKY_III2.4		HORVU1Hr1G069620.4	1681	239 (43-103)	-	A0A287G3Q0								
	HvWRKY_III2.5		HORVU1Hr1G069620.5	820	224 (28-88)	-	A0A287G3Q8								
	HvWRKY_III2.6		HORVU1Hr1G069620.6	302	54 (-)	-	A0A287G3P6								
	HvWRKY_III2.7		HORVU1Hr1G069620.7	1236	300 (105-165)	-	M0UXM3								
	HvWRKY_III2.8		HORVU1Hr1G069620.8	878	214 (19-79)	-	A0A287G3Q4								
HvWRKY_III3	HvWRKY_III3.1	HORVU1Hr1G069640	HORVU1Hr1G069640.1	969	104 (-)	-	M0X4S7	1:486545479-486548972 (-)	HvWRKY85	---	---	---	---	---	MLOC_57051
	HvWRKY05.2		HORVU1Hr1G069640.2	879	293 (145-206)	2	A0A287G3R3								
	HvWRKY05.3		HORVU1Hr1G069640.3	382	90 (-)	-	A0A287G3Q1								
HvWRKY_III4	HvWRKY_III4	HORVU1Hr1G090110	HORVU1Hr1G090110.1	1218	253 (104-164)	-	A0A287GNQ7	1:545365232-545365543 (-)	HvWRKY27	Hv.29820	DQ863111	ABI13393			MLOC_79171
HvWRKY_III5	HvWRKY_III5.1	HORVU1Hr1G090130	HORVU1Hr1G090130.1	1060	131 (1-42)	-	A0A287GNU3	1:545428879-545463621 (-)	HvWRKY87	---	---	---	---	---	MLOC_17779
	HvWRKY_III5.2		HORVU1Hr1G090130.2	529	176 (124-176)	1	A0A287GNS4 K7QR42								
	HvWRKY_III5.3		HORVU1Hr1G090130.3	2799	175 (19-79)	1	A0A287GNQ6								
	HvWRKY_III5.4		HORVU1Hr1G090130.4	1282	260 (104-164)	-	A0A287GNQ2								
	HvWRKY_III5.5		HORVU1Hr1G090130.5	450	149 (1-53)	-	M0V3N3								
	HvWRKY_III5.6		HORVU1Hr1G090130.6	437	145 (41-101)	-	A0A287GNV4								
HvWRKY_III6	HvWRKY_III6	HORVU1Hr1G090170	HORVU1Hr1G090170.1	1378	247 (97-157)	-	B2KJ71 M0Y4T7	1:545489901-545490437 (+)	HvWRKY29	Hv.29824	DQ863113	ABI13395			MLOC_65699
HvWRKY_III7	HvWRKY_III7.1	HORVU1Hr1G090190	HORVU1Hr1G090190.1	2548	254 (95-155)	1	F2E0Y3	1:545514071-545514832 (+)	HvWRKY26	Hv.1115	AK369804	BAK01005	---	---	---
	HvWRKY_III7.2		HORVU1Hr1G090190.2	3290	254 (95-155)	-	F2E0Y3								
	HvWRKY_III7.3		HORVU1Hr1G090190.3	1913	254 (95-155)	1	F2E0Y3								

	HvWRKY_III7.4		HORVU1Hr1G090190.4	1895	254 (95-155)	-	F2E0Y3												
	HvWRKY_III7.5		HORVU1Hr1G090190.5	1928	254 (95-155)	1	F2E0Y3												
	HvWRKY_III7.6		HORVU1Hr1G090190.6	3053	254 (95-155)	1	F2E0Y3												
	HvWRKY_III7.7		HORVU1Hr1G090190.7	1229	187 (28-88)	1	A0A287GNS6												
	HvWRKY_III7.8		HORVU1Hr1G090190.8	1488	184 (25-85)	1	A0A287GNW5												
	HvWRKY_III7.9		HORVU1Hr1G090190.9	366	45 (-)	-	A0A287GNU6												
HvWRKY_III8	HvWRKY_III8.1	HORVU2Hr1G006600	HORVU2Hr1G006600.1	1231	321 (140-205)	-	M0YJN3	2:13841302-13842222 (-)	HvWRKY83	---	---	---	---	---	---	---	---	---	MLOC_7000
	HvWRKY_III8.2		HORVU2Hr1G006600.2	1132	288 (107-172)	1	A0A287GZJ0												
	HvWRKY_III8.3		HORVU2Hr1G006600.3	1052	288 (107-172)	1	A0A287GZJ0												
	HvWRKY_III8.4		HORVU2Hr1G006600.4	1006	302 (121-186)	1	A0A287GZL9												
HvWRKY_III9	HvWRKY_III9.1	HORVU2Hr1G017740	HORVU2Hr1G017740.1	1215	235 (8-68)	2	A0A287H7Q2	2:44647261-44648497 (-)	HvWRKY4	Hv.13574	AK371133	BAK023311	---	---	---	---	---	---	MLOC_74606
	HvWRKY_III9.2		HORVU2Hr1G017740.2	934	247 (20-80)	1	A0A287H7Y7												
	HvWRKY_III9.3		HORVU2Hr1G017740.3	1316	348 (121-181)	2	A0A287H7W7 Q5W1F8												
	HvWRKY_III9.4		HORVU2Hr1G017740.4	643	204 (1-42)	1	A0A287H7W1												
HvWRKY_III10	HvWRKY_III10.1	HORVU2Hr1G029430	HORVU2Hr1G029430.1	491	163 (136-163)	1	A0A287HJ34	2:104974257-104974487 (-)	HvWRKY30	Hv.3567	AK361795	BAJ92999	---	---	---	---	---	---	MLOC_71897
	HvWRKY_III10.2		HORVU2Hr1G029430.2	909	244 (134-186)	1	A0A287HIS4												
HvWRKY_III11	HvWRKY_III11	HORVU2Hr1G109330	HORVU2Hr1G109330.1	1370	325 (140-200)	2	A0A287JE57	2:716404504-716405408 (-)	HvWRKY32	Hv.15495	AK360029	BAJ91238	---	---	---	---	---	---	---
HvWRKY_III12	HvWRKY_III12.1	HORVU3Hr1G059220	HORVU3Hr1G059220.1	1360	308 (126-186)	2	M0W799	3:448010884-448011996 (+)	HvWRKY21	Hv.21259	AK357930	BAJ89144	---	---	---	---	---	---	MLOC_44455
	HvWRKY_III12.2		HORVU3Hr1G059220.2	1658	104 (-)	-	A0A287L8B6												
	HvWRKY_III12.3		HORVU3Hr1G059220.3	1374	166 (1-44)	1	A0A287L891												
	HvWRKY_III12.4		HORVU3Hr1G059220.4	1109	111 (62-84)	1	A0A287L889												
HvWRKY_III13	HvWRKY_III13.1	HORVU3Hr1G080860	HORVU3Hr1G080860.1	1186	256 (49-110)	2	K7QT20 M0XLM5	3:591187733-591191272 (-)	HvWRKY53	---	JQ806391	AFV67806	---	---	---	---	---	---	MLOC_6114
	HvWRKY_III13.2		HORVU3Hr1G080860.2	180	60 (36-57)	2	A0A287LWJ1												
HvWRKY_III14	HvWRKY_III14	HORVU3Hr1G080960	HORVU3Hr1G080960.1	1509	360 (120-183)	2	M0VMN8	3:592192920-592193219 (-)	HvWRKY86	---	---	---	---	---	---	---	---	---	MLOC_34506
HvWRKY_III15	HvWRKY_III15.1	HORVU3Hr1G080980	HORVU3Hr1G080980.1	1048	245 (76-135)	2	A0A287LWI6	3:592402296-592403195 (+)	HvWRKY70	Hv.8069	BQ763606	---	---	---	---	---	---	---	---
	HvWRKY_III15.2		HORVU3Hr1G080980.2	1109	177 (-)	1	A0A287LWJ9												
HvWRKY_III16	HvWRKY_III16.1	HORVU3Hr1G081000	HORVU3Hr1G081000.1	863	191 (124-188)	2	A0A287LWL9 K7QPR5	3:592421263-592422540 (+)	HvWRKY72, HvWRKY49	JQ806390	AFV67805	---	---	---	---	---	---	---	MLOC_3853
	HvWRKY_III16.2		HORVU3Hr1G081000.2	1699	151 (-)	-	A0A287LWM3												
	HvWRKY_III16.3		HORVU3Hr1G081000.3	1550	198 (160-193)	1	A0A287LWI8												
HvWRKY_III17	HvWRKY_III17.1	HORVU3Hr1G081030	HORVU3Hr1G081030.1	844	194 (-)	1	A0A287LWP5	3:592448752-592449292 (+)	HvWRKY82	---	---	---	---	---	---	---	---	---	MLOC_68061
	HvWRKY_III17.2		HORVU3Hr1G081030.2	810	228 (196-228)	1	A0A287LWP6												
	HvWRKY_III17.3		HORVU3Hr1G081030.3	5311	320 (163-222)	2	A0A287LWL3												
	HvWRKY_III17.4		HORVU3Hr1G081030.4	1343	140 (-)	-	A0A287LWK9												
	HvWRKY_III17.5		HORVU3Hr1G081030.5	824	114 (-)	1	A0A287LWN0												
HvWRKY_III18	HvWRKY_III18.1	HORVU4Hr1G022970	HORVU4Hr1G022970.1	848	163 (1-44)	-	A0A287NIV2	4:122785214-122787806 (-)	HvWRKY34	Hv.1750	AK365657	BAJ96860	---	---	---	---	---	---	MLOC_34522
	HvWRKY_III18.2		HORVU4Hr1G022970.2	1129	279 (99-160)	2	A0A287NIN4												
	HvWRKY_III18.3		HORVU4Hr1G022970.3	1030	260 (80-141)	2	A0A287NJ52												
	HvWRKY_III18.4		HORVU4Hr1G022970.4	677	137 (-)	2	A0A287NIM5												
	HvWRKY_III18.5		HORVU4Hr1G022970.5	695	137 (-)	2	A0A287NIM5												
	HvWRKY_III18.6		HORVU4Hr1G022970.6	626	194 (28-80)	-	A0A287NIV7												
	HvWRKY_III18.7		HORVU4Hr1G022970.7	591	197 (43-100)	2	A0A287NIN9												
	HvWRKY_III18.8		HORVU4Hr1G022970.8	586	151 (97-119)	1	A0A287NJ57												
HvWRKY_III19	HvWRKY_III19.1	HORVU4Hr1G052010	HORVU4Hr1G052010.1	1643	184 (11-72)	1	A0A287PIC1	4:428289279-428290292 (-)	HvWRKY33	Hv.16020	AK363340	BAJ94544	---	---	---	---	---	---	MLOC_57764
	HvWRKY_III19.2		HORVU4Hr1G052010.2	1976	206 (33-94)	2	M0X7Z2												
HvWRKY_III20	HvWRKY_III20.1	HORVU5Hr1G034830	HORVU5Hr1G034830.1	1613	232 (22-82)	1	A0A287QUL3	5:237020407-237021820 (-)	HvWRKY22	Hv.29810	DQ863106	ABI13388	---	---	---	---	---	---	MLOC_45055
	HvWRKY_III20.2		HORVU5Hr1G034830.2	1795	195 (1-45)	1	M0W8U2												
	HvWRKY_III20.3		HORVU5Hr1G034830.3	1449	332 (122-182)	2	M0W8U1												
	HvWRKY_III20.4		HORVU5Hr1G034830.4	1867	195 (1-45)	-	M0W8U2												
	HvWRKY_III20.5		HORVU5Hr1G034830.5	1515	332 (122-182)	2	M0W8U1												

HvWRKY_III21	HvWRKY_III21.1	HORVU5Hr1G046390	HORVU5Hr1G046390.1	1043	191 (171-191)	-	A0A287R288	5:360368691-360368990 (+)	HvWRKY80	---	---	---	MLOC_68369
	HvWRKY_III21.2		HORVU5Hr1G046390.2	1285	373 (169-234)	1	A0A287R1T5						
	HvWRKY_III21.3		HORVU5Hr1G046390.3	1189	189 (2-50)	-	A0A287R220						
HvWRKY_III22	HvWRKY_III22.1	HORVU5Hr1G046430	HORVU5Hr1G046430.1	1065	326 (151-219)	2	A0A287R1U0	5:361022623-361023396 (-)	HvWRKY93	---	---	---	morex_contig_1558450
	HvWRKY_III22.2		HORVU5Hr1G046430.2	1067	255 (151-201)	2	A0A287R224						
	HvWRKY_III22.3		HORVU5Hr1G046430.3	637	145 (-)	1	A0A287R216						
	HvWRKY_III22.4		HORVU5Hr1G046430.4	605	132 (-)	-	A0A287R1T7						
HvWRKY_III23	HvWRKY_III23.1	HORVU5Hr1G056130	HORVU5Hr1G056130.1	3272	223 (10-61)	5	M0WKX3	5:439205854-439206927 (-)	HvWRKY28	Hv.13249	DQ863112	ABI13394	MLOC_52504
	HvWRKY_III23.2		HORVU5Hr1G056130.2	4947	392 (170-230)	2	A0A287RB62 B2KJ70						
	HvWRKY_III23.3		HORVU5Hr1G056130.3	5337	226 (170-192)	1	A0A287RAQ9						
	HvWRKY_III23.4		HORVU5Hr1G056130.4	1874	156 (-)	1	A0A287RAZ5						
	HvWRKY_III23.5		HORVU5Hr1G056130.5	1284	221 (165-187)	1	A0A287RAZ6						
	HvWRKY_III23.6		HORVU5Hr1G056130.6	240	79 (-)	1	A0A287RAW2						
HvWRKY_III24	HvWRKY_III24.1	HORVU5Hr1G085900	HORVU5Hr1G085900.1	5618	1366 (1343-1365)	4	A0A287S3V4	5:575707885-575709109 (-)	HvWRKY24	Hv.29804	DQ863108	ABI13390	MLOC_74974
	HvWRKY_III24.2		HORVU5Hr1G085900.2	3867	1027 (728-788) (843-903)	4	A0A287S457						
	HvWRKY_III24.3		HORVU5Hr1G085900.3	5403	751 (728-750)	3	A0A287S3Z0						
	HvWRKY_III24.4		HORVU5Hr1G085900.4	5186	1027 (728-788) (843-903)	5	A0A287S457						
	HvWRKY_III24.5		HORVU5Hr1G085900.5	5198	1573 (1274-1334) (1389-1449)	5	A0A287S3W6						
	HvWRKY_III24.6		HORVU5Hr1G085900.6	5804	1366 (1343-1365)	4	A0A287S3V4						
	HvWRKY_III24.7		HORVU5Hr1G085900.7	5963	751 (728-750)	3	A0A287S3Z0						
	HvWRKY_III24.8		HORVU5Hr1G085900.8	5126	1550 (1251-1311) (1366-1426)	5	A0A287S3Y8						
	HvWRKY_III24.9		HORVU5Hr1G085900.9	5694	1027 (728-788) (843-903)	4	A0A287S457						
	HvWRKY_III24.10		HORVU5Hr1G085900.10	5695	843 (728-788)	4	A0A287S442						
	HvWRKY_III24.11		HORVU5Hr1G085900.11	1160	195 (11-71)	1	A0A287S3V1						
	HvWRKY_III24.12		HORVU5Hr1G085900.12	3892	752 (729-751)	3	A0A287S3U1						
	HvWRKY_III24.13		HORVU5Hr1G085900.13	5351	751 (728-750)	3	A0A287S3Z0						
	HvWRKY_III24.14		HORVU5Hr1G085900.14	1483	248 (64-124)	3	M0Z012						
	HvWRKY_III24.15		HORVU5Hr1G085900.15	5065	1531 (1235-1292) (1347-1407)	5	A0A287S447						
	HvWRKY_III24.16		HORVU5Hr1G085900.16	1076	104 (-)	-	A0A287S3V6						
	HvWRKY_III24.17		HORVU5Hr1G085900.17	1698	248 (64-124)	3	M0Z012						
	HvWRKY_III24.18		HORVU5Hr1G085900.18	5236	1252(-)	4	A0A287S3Z5						
	HvWRKY_III24.19		HORVU5Hr1G085900.19	3781	831 (728-788)	4	A0A287S3X8						
	HvWRKY_III24.20		HORVU5Hr1G085900.20	3829	751 (728-750)	3	A0A287S3Z0						
	HvWRKY_III24.21		HORVU5Hr1G085900.21	4121	1043 (-)	6	A0A287S3V0						
	HvWRKY_III24.22		HORVU5Hr1G085900.22	3826	1214 (-)	1	A0A287S400						
HvWRKY_III25	HvWRKY_III25.1	HORVU6Hr1G013890	HORVU6Hr1G013890.1	1000	165 (1-44)	-	A0A287TDT9	6:29376500-29377124 (-)	HvWRKY92	---	---	---	morex_contig_37805_prediction
	HvWRKY_III25.2		HORVU6Hr1G013890.2	1261	197 (16-76)	1	A0A287TDJ1						
	HvWRKY_III25.3		HORVU6Hr1G013890.3	780	221 (40-100)	2	A0A287TDG1						
HvWRKY_III26	HvWRKY_III26.1	HORVU7Hr1G075960	HORVU7Hr1G075960.1	1777	293 (68-126)	2	A0A287WY92	7:442020741-442021843 (-)	HvWRKY71	---	EX572151	---	MLOC_78461
	HvWRKY_III26.2		HORVU7Hr1G075960.2	743	116 (-)	1	A0A287WY62						
HvWRKY_III27	HvWRKY_III27.1	HORVU7Hr1G083270	HORVU7Hr1G083270.1	490	110 (-)	-	A0A287X479	7:501968833-501969285 (-)	HvWRKY78	---	---	---	MLOC_66134
	HvWRKY_III27.2		HORVU7Hr1G083270.2	927	308 (112-172)	3	A0A287X4K4						
	HvWRKY_III27.3		HORVU7Hr1G083270.3	1432	103 (30-90)	1	A0A287X4F8						
	HvWRKY_III27.4		HORVU7Hr1G083270.4	995	184 (111-171)	2	A0A287X4B0						
	HvWRKY_III27.5		HORVU7Hr1G083270.5	984	142 (112-137)	1	A0A287X466						

HvWRKY_III28	HvWRKY_III28	---	---	---	143 (106-143)	---	---	---	HvWRKY55		JQ806392	AFV67807	---
HvWRKY_III29	HvWRKY_III29	---	---	---	205 (188-205)	---	---	---	HvWRKY89	---	---	---	MLOC_54895
HvWRKY_III30	HvWRKY_III30	---	---	---	168 (29-88) (138-168)	---	---	---	HvWRKY25	Hv.29821	DQ863109	ABI13391	---
HvWRKY_III31	HvWRKY_III31	---	---	---	375 (140- 200)	---	---	---	HvWRKY62	---	DQ900687	ABL11228	