

Table S3. Results of the analysis of 253 MHD-containing sequences in the SGD database.

SGD sequence identifier	Source of error	C6 motif	hmmsearch E-value
YAL051W_FostersB	FRAMESHIFT	FULL	7.0e-16
YAL051W_FostersO	FRAMESHIFT	FULL	7.0e-16
YAL051W_LalvinQA23	FRAMESHIFT	FULL	7.0e-16
YAL051W_Vin13	FRAMESHIFT	FULL	7.0e-16
YAL051W_VL3	FRAMESHIFT	FULL	7.0e-16
YBL005W_AWRI796	FRAMESHIFT	FULL	8.2e-13
YBL005W_FostersO	FRAMESHIFT	FULL	8.5e-13
YBL005W_YJM269	FRAMESHIFT	FULL	8.4e-13
YBL066C_AWRI796	FRAMESHIFT	FULL	2.8e-15
YBL066C_FostersO	FRAMESHIFT	FULL	6.5e-15
YBL066C_LalvinQA23	FRAMESHIFT	FULL	2.8e-15
YBL066C_Vin13	FRAMESHIFT	FULL	2.8e-15
YBL066C_YJM269	FRAMESHIFT	FULL	2.8e-15
YBR033W_AWRI796	FRAMESHIFT	FULL	6.4e-13
YBR033W_CBS7960	START CODON	FULL	6.6e-13
YBR033W_FostersB	FRAMESHIFT	FULL	6.5e-13
YBR033W_K11	START CODON	FULL	6.7e-13
YBR033W_Kyokai7	START CODON	FULL	6.7e-13
YBR033W_RedStar	START CODON	FULL	6.6e-13
YBR033W_T7	START CODON	FULL	6.2e-13
YBR033W_UC5	START CODON	FULL	6.7e-13
YBR033W_VL3	FRAMESHIFT	FULL	6.5e-13
YBR033W_YPS128	START CODON	FULL	6.6e-13
YBR033W_YPS163	START CODON	FULL	6.6e-13
YBR033W_YS9	START CODON	FULL	6.5e-13
YBR033W_ZTW1	FRAMESHIFT	FULL	6.6e-13
YBR150C_LalvinQA23	FRAMESHIFT	FULL	1.3e-12
YBR150C_Vin13	FRAMESHIFT	FULL	1.3e-12
YBR150C_VL3	FRAMESHIFT	FULL	1.2e-12
YBR297W_AWRI1631	FRAMESHIFT	FULL	2.3e-17
YBR297W_AWRI796	FRAMESHIFT	FULL	2.4e-17
YBR297W_BC187	SCAFFOLD	FULL	2.3e-17
YBR297W_FY1679	Unknown	FULL	3.0e-17
YBR297W_Vin13	SCAFFOLD	FULL	5.1e-17
YBR297W_W303	Unknown	FULL	3.0e-17
YBR297W_X2180-1A	Unknown	FULL	3.0e-17
YCR106W_AWRI796	FRAMESHIFT	FULL	1.4e-13
YCR106W_BY4741	SCAFFOLD	NONE	1.0e+03

YCR106W_BY4742	Undetermined genome region	FULL	1.4e-13
YCR106W_CBS7960	REPEAT	FULL	1.4e-13
YCR106W_FY1679	FRAMESHIFT	FULL	7.2e-09
YCR106W_LalvinQA23	FRAMESHIFT	FULL	1.4e-13
YCR106W_M22	FRAMESHIFT	FULL	1.4e-13
YCR106W_Sigma1278b	SCAFFOLD	NONE	1.0e+03
YCR106W_Vin13	FRAMESHIFT	FULL	1.4e-13
YCR106W_VL3	FRAMESHIFT	FULL	1.4e-13
YCR106W_W303	SCAFFOLD	NONE	1.0e+03
YCR106W_X2180-1A	SCAFFOLD	NONE	1.0e+03
YCR106W_YPH499	Undetermined genome region	FULL	1.4e-13
YCR106W_YPS128	SCAFFOLD	PARTIAL	2.0e-07
YCR106W_YPS163	SCAFFOLD	PARTIAL	4.4e-07
YDR303C_EC1118	FRAMESHIFT	FULL	1.1e-12
YDR303C_FostersB	FRAMESHIFT	FULL	1.1e-12
YDR303C_FostersO	FRAMESHIFT	FULL	1.1e-12
YDR303C_Vin13	START CODON	FULL	1.1e-12
YDR303C_VL3	FRAMESHIFT	FULL	4.3e-12
YDR421W_FostersB	FRAMESHIFT	FULL	9.0e-12
YDR421W_FostersO	FRAMESHIFT	FULL	9.1e-12
YDR421W_JAY291	START CODON	FULL	8.9e-12
YDR520C_AWRI796	FRAMESHIFT	FULL	8.3e-10
YDR520C_CLIB324	FRAMESHIFT	FULL	8.3e-10
YDR520C_FostersB	FRAMESHIFT	FULL	8.2e-10
YER184C_AWRI796	FRAMESHIFT	FULL	1.9e-13
YER184C_FostersB	FRAMESHIFT	FULL	2.0e-13
YER184C_FostersO	FRAMESHIFT	FULL	2.9e-13
YER184C_LalvinQA23	FRAMESHIFT	FULL	1.9e-13
YER184C_Vin13	FRAMESHIFT	PARTIAL	3.2e-11
YER184C_ZTW1	FRAMESHIFT	FULL	2.0e-13
YGL013C_CLIB215	FRAMESHIFT	FULL	4.7e-14
YGL013C_FostersB	FRAMESHIFT	FULL	4.7e-14
YGL013C_FostersO	FRAMESHIFT	FULL	4.7e-14
YGL013C_Vin13	FRAMESHIFT	FULL	4.7e-14
YGR288W_FostersB	START CODON	FULL	2.1e-14
YGR288W_FostersO	START CODON	FULL	2.1e-14
YGR288W_VL3	START CODON	FULL	2.2e-14
YHR056C_FostersB	FRAMESHIFT	FULL	3.3e-12
YHR056C_M22	SCAFFOLD BORDER	NONE	1.0e+03
YHR056C_RM11-1a	START CODON	FULL	3.6e-12
YHR056C_T73	FRAMESHIFT	FULL	1.2e-12

YHR056C_VL3	FRAMESHIFT	FULL	3.6e-12
YHR178W_FostersO	FRAMESHIFT	FULL	7.1e-13
YHR178W_Vin13	FRAMESHIFT	FULL	7.1e-13
YHR178W_VL3	FRAMESHIFT	FULL	7.1e-13
YHR178W_ZTW1	FRAMESHIFT	FULL	7.1e-13
YIL130W_AWRI796	FRAMESHIFT	FULL	3.9e-15
YIL130W_FostersB	FRAMESHIFT	FULL	5.1e-13
YIL130W_FostersO	FRAMESHIFT	FULL	5.1e-13
YIL130W_LalvinQA23	FRAMESHIFT	FULL	3.9e-15
YIL130W_Vin13	FRAMESHIFT	FULL	3.9e-15
YIL130W_VL3	FRAMESHIFT	FULL	3.9e-15
YIL130W_Y55	FRAMESHIFT	FULL	3.9e-15
YIR023W_AWRI796	FRAMESHIFT	FULL	4.7e-12
YIR023W_EC1118	FRAMESHIFT	FULL	4.7e-12
YIR023W_FostersB	FRAMESHIFT	FULL	4.8e-12
YIR023W_FostersO	FRAMESHIFT	FULL	1.2e-11
YIR023W_LalvinQA23	FRAMESHIFT	FULL	4.5e-12
YIR023W_T73	FRAMESHIFT	FULL	4.7e-12
YIR023W_VL3	FRAMESHIFT	FULL	4.5e-12
YIR023W_YJM269	FRAMESHIFT	FULL	4.7e-12
YJL089W_AWRI796	FRAMESHIFT	FULL	2.6e-15
YJL089W_FostersB	FRAMESHIFT	FULL	2.6e-15
YJL089W_FostersO	FRAMESHIFT	FULL	2.6e-15
YJL089W_LalvinQA23	FRAMESHIFT	FULL	2.6e-15
YJL089W_VL3	FRAMESHIFT	FULL	2.6e-15
YJL206C_AWRI796	FRAMESHIFT	FULL	1.0e-13
YJL206C_CBS7960	FRAMESHIFT	FULL	1.0e-13
YJL206C_CLIB215	FRAMESHIFT	FULL	1.0e-13
YJL206C_FostersB	FRAMESHIFT	FULL	1.1e-13
YJL206C_Sigma1278b	START CODON	FULL	1.0e-13
YJL206C_Vin13	FRAMESHIFT	FULL	1.0e-13
YKL015W_AWRI796	FRAMESHIFT	FULL	1.1e-14
YKL015W_FostersB	FRAMESHIFT	FULL	1.1e-14
YKL015W_FostersO	FRAMESHIFT	FULL	7.9e-14
YKL015W_LalvinQA23	FRAMESHIFT	FULL	1.1e-14
YKL015W_T73	FRAMESHIFT	FULL	1.0e-14
YKL015W_Vin13	FRAMESHIFT	FULL	2.2e-14
YKL015W_VL3	FRAMESHIFT	FULL	2.2e-14
YKL015W_YJM269	FRAMESHIFT	FULL	1.1e-14
YKL038W_D273-10B	START CODON	FULL	5.3e-14
YKL038W_DBVPG6044	START CODON	FULL	5.3e-14
YKL038W_EC1118	FRAMESHIFT	FULL	5.3e-14
YKL038W_EC9-8	FRAMESHIFT	FULL	5.3e-14

YKL038W_FostersB	START CODON	FULL	5.3e-14
YKL038W_FostersO	FRAMESHIFT	FULL	5.3e-14
YKL038W_K11	START CODON	FULL	5.3e-14
YKL038W_Kyokai7	START CODON	FULL	5.3e-14
YKL038W_LalvinQA23	FRAMESHIFT	FULL	5.3e-14
YKL038W_PW5	START CODON	FULL	5.3e-14
YKL038W_RedStar	START CODON	FULL	5.2e-14
YKL038W_Sigma1278b	START CODON	FULL	5.3e-14
YKL038W_SK1	START CODON	FULL	5.3e-14
YKL038W_T7	START CODON	FULL	5.3e-14
YKL038W_UC5	FRAMESHIFT	FULL	5.3e-14
YKL038W_Vin13	FRAMESHIFT	FULL	5.3e-14
YKL038W_VL3	FRAMESHIFT	FULL	5.3e-14
YKL038W_Y55	START CODON	FULL	5.3e-14
YKL038W_YJM339	START CODON	FULL	5.4e-14
YKL038W_YJM789	START CODON	FULL	5.3e-14
YKL038W_YS9	START CODON	FULL	5.3e-14
YKL038W_ZTW1	START CODON	FULL	5.3e-14
YKL222C_AWRI1631	FRAMESHIFT	FULL	3.9e-10
YKL222C_CBS7960	FRAMESHIFT	FULL	3.9e-10
YKL222C_EC9-8	START CODON	FULL	3.9e-10
YKL222C_FostersB	FRAMESHIFT	FULL	2.0e-10
YKL222C_FostersO	FRAMESHIFT	FULL	3.9e-10
YKL222C_LalvinQA23	START CODON	FULL	3.9e-10
YKL222C_PW5	START CODON	FULL	3.9e-10
YKL222C_Vin13	FRAMESHIFT	FULL	3.9e-10
YKL222C_VL3	FRAMESHIFT	FULL	3.9e-10
YKL222C_ZTW1	START CODON	FULL	3.9e-10
YKR064W_AWRI796	FRAMESHIFT	FULL	1.4e-13
YKR064W_CBS7960	FRAMESHIFT	FULL	1.5e-13
YKR064W_EC1118	FRAMESHIFT	FULL	1.4e-13
YKR064W_FostersB	FRAMESHIFT	FULL	1.4e-13
YKR064W_FostersO	FRAMESHIFT	PARTIAL	4.5e-11
YKR064W_LalvinQA23	FRAMESHIFT	FULL	1.3e-13
YKR064W_Vin13	FRAMESHIFT	FULL	1.4e-13
YKR064W_VL3	FRAMESHIFT	FULL	1.4e-13
YKR064W_YJM269	FRAMESHIFT	FULL	1.5e-13
YLL054C_AWRI1631	START CODON	FULL	5.9e-12
YLL054C_AWRI796	FRAMESHIFT	FULL	5.8e-12
YLL054C_CLIB324	FRAMESHIFT	FULL	5.9e-12
YLL054C_EC1118	FRAMESHIFT	FULL	5.8e-12
YLL054C_FostersB	FRAMESHIFT	FULL	5.9e-12
YLL054C_FostersO	FRAMESHIFT	FULL	5.9e-12

YLL054C_LalvinQA23	FRAMESHIFT	FULL	5.9e-12
YLL054C_PW5	START CODON	FULL	5.8e-12
YLL054C_Vin13	FRAMESHIFT	FULL	5.9e-12
YLL054C_VL3	FRAMESHIFT	FULL	5.8e-12
YLL054C_ZTW1	FRAMESHIFT	FULL	6.9e-12
YLR014C_AWRI1631	FRAMESHIFT	FULL	8.4e-15
YLR014C_AWRI796	FRAMESHIFT	FULL	8.4e-15
YLR014C_CLIB215	FRAMESHIFT	FULL	8.4e-15
YLR014C_FostersB	FRAMESHIFT	FULL	1.9e-14
YLR014C_FostersO	FRAMESHIFT	FULL	8.4e-15
YLR014C_LalvinQA23	FRAMESHIFT	FULL	8.5e-15
YLR014C_Vin13	FRAMESHIFT	FULL	8.4e-15
YLR014C_VL3	FRAMESHIFT	FULL	8.4e-15
YLR098C_AWRI796	FRAMESHIFT	FULL	7.7e-15
YLR098C_FostersB	FRAMESHIFT	FULL	7.7e-15
YLR098C_FostersO	FRAMESHIFT	FULL	7.7e-15
YLR098C_LalvinQA23	FRAMESHIFT	FULL	7.7e-15
YLR256W_FostersO	FRAMESHIFT	FULL	1.9e-12
YLR266C_AWRI796	FRAMESHIFT	FULL	1.2e-10
YLR266C_FostersB	FRAMESHIFT	FULL	1.1e-10
YLR266C_FostersO	START CODON	FULL	1.0e-10
YLR266C_Vin13	START CODON	FULL	1.9e-08
YLR266C_VL3	FRAMESHIFT	FULL	1.1e-10
YLR278C_CBS7960	Unknown	FULL	8.8e-11
YLR278C_CLIB215	FRAMESHIFT	FULL	8.7e-11
YLR278C_FostersO	FRAMESHIFT	FULL	8.7e-11
YLR451W_LalvinQA23	START CODON	FULL	1.4e-12
YML076C_AWRI796	FRAMESHIFT	FULL	2.1e-06
YML076C_CLIB215	START CODON	FULL	1.8e-07
YML076C_FostersB	FRAMESHIFT	FULL	5.8e-06
YML076C_FostersO	FRAMESHIFT	FULL	2.1e-06
YML076C_LalvinQA23	FRAMESHIFT	FULL	2.1e-06
YMR019W_FostersO	FRAMESHIFT	FULL	4.9e-12
YMR019W_LalvinQA23	FRAMESHIFT	FULL	1.2e-12
YMR019W_Vin13	FRAMESHIFT	FULL	2.5e-12
YMR168C_AWRI1631	FRAMESHIFT	FULL	5.6e-13
YMR280C_AWRI796	FRAMESHIFT	FULL	6.0e-15
YMR280C_FostersB	FRAMESHIFT	FULL	6.0e-15
YMR280C_FostersO	FRAMESHIFT	FULL	6.0e-15
YMR280C_LalvinQA23	FRAMESHIFT	FULL	6.0e-15
YMR280C_RedStar	FRAMESHIFT	FULL	5.9e-15
YMR280C_Vin13	FRAMESHIFT	FULL	6.0e-15
YMR280C_YJM269	FRAMESHIFT	FULL	5.8e-15

YNR063W_AWRI796	FRAMESHIFT	FULL	2.2e-14
YNR063W_CLIB215	FRAMESHIFT	FULL	2.2e-14
YNR063W_FostersO	FRAMESHIFT	FULL	1.4e-14
YNR063W_PW5	FRAMESHIFT	FULL	3.3e-14
YNR063W_VL3	FRAMESHIFT	FULL	2.3e-14
YOL089C_AWRI796	FRAMESHIFT	FULL	3.3e-13
YOL089C_CBS7960	FRAMESHIFT	FULL	3.3e-13
YOL089C_FostersB	FRAMESHIFT	FULL	3.3e-13
YOL089C_FostersO	FRAMESHIFT	FULL	4.2e-13
YOL089C_L1528	START CODON	FULL	3.3e-13
YOL089C_LalvinQA23	FRAMESHIFT	FULL	3.3e-13
YOL089C_PW5	FRAMESHIFT	FULL	3.3e-13
YOL089C_Vin13	FRAMESHIFT	FULL	3.3e-13
YOL089C_VL3	FRAMESHIFT	FULL	3.4e-13
YOL089C_YJM789	START CODON	FULL	3.3e-13
YOR162C_FostersB	FRAMESHIFT	FULL	1.7e-12
YOR162C_FostersO	FRAMESHIFT	FULL	1.7e-12
YOR162C_Vin13	FRAMESHIFT	FULL	1.7e-12
YOR162C_VL3	FRAMESHIFT	FULL	1.7e-12
YOR162C_ZTW1	FRAMESHIFT	FULL	2.4e-12
YOR172W_AWRI796	FRAMESHIFT	FULL	8.8e-12
YOR172W_JAY291	START CODON	FULL	8.9e-12
YOR172W_Kyokai7	START CODON	FULL	5.1e-05
YOR172W_LalvinQA23	FRAMESHIFT	FULL	8.8e-12
YOR337W_AWRI796	FRAMESHIFT	FULL	3.5e-12
YOR337W_FostersB	FRAMESHIFT	FULL	3.5e-12
YOR337W_FostersO	FRAMESHIFT	FULL	3.5e-12
YOR337W_LalvinQA23	FRAMESHIFT	FULL	3.7e-12
YOR337W_T73	FRAMESHIFT	FULL	3.5e-12
YOR337W_Vin13	FRAMESHIFT	FULL	3.6e-12
YOR337W_VL3	FRAMESHIFT	FULL	3.7e-12
YOR380W_AWRI796	FRAMESHIFT	FULL	2.2e-12
YOR380W_LalvinQA23	FRAMESHIFT	FULL	2.2e-12
YOR380W_VL3	FRAMESHIFT	FULL	2.2e-12
YPL248C_AWRI1631	FRAMESHIFT	FULL	4.9e-14
YPL248C_FostersB	FRAMESHIFT	FULL	1.8e-13
YPR196W_AWRI796	FRAMESHIFT	FULL	5.2e-12
YPR196W_BY4741	START CODON	FULL	6.6e-12
YPR196W_CLIB324	FRAMESHIFT	FULL	5.4e-12
YPR196W_EC9-8	FRAMESHIFT	FULL	5.3e-12
YPR196W_FostersB	FRAMESHIFT	FULL	5.0e-12
YPR196W_FostersO	FRAMESHIFT	PARTIAL	4.2e-11
YPR196W_LalvinQA23	FRAMESHIFT	FULL	5.3e-12

YPR196W_SEY6210	Unknown	FULL	6.6e-12
YPR196W_VL3	FRAMESHIFT	FULL	5.3e-12