

Supplementary Table S1. Real classes and predictions performed by the Gradient Boosting model (prediction based on structure) and the Decision Tree model (prediction based on sequence).

Allele	Real class	Prediction based on Structure	Prediction based on Sequence	Mutations
*9	Decreased function	Decreased function	Normal function	R296C, K281del
*84	Decreased function	Decreased function	Normal function	P267H, R296C, S486T
*72	Decreased function	Decreased function	Decreased function	P34S, E383K, S486T
*59	Decreased function	Normal function	Normal function	R296C, S486T
*55	Decreased function	Decreased function	Normal function	R296C, K404Q, S486T
*54	Decreased function	Decreased function	Decreased function	P34S, T261I, S486T
*50	Decreased function	Decreased function	Normal function	E156A
*49	Decreased function	Decreased function	Decreased function	P34S, F120I, S486T
*41	Decreased function	Normal function	Normal function	R296C, S486T
*29	Decreased function	Decreased function	Normal function	V136M, R296C, V338M, S486T
*17	Decreased function	Decreased function	Normal function	T107I, R296C, S486T
*14	Decreased function	Decreased function	Normal function	G169R, R296C, S486T
*10D	Decreased function	Decreased function	Decreased function	P34S, S486T
*10B	Decreased function	Decreased function	Decreased function	P34S, S486T
*10A	Decreased function	Decreased function	Decreased function	P34S, S486T
*53	Normal function	Normal function	Normal function	F120I, A122S
*48	Normal function	Normal function	Normal function	A90V
*46B	Normal function	Normal function	Normal function	R26H, E155K, R296C, S486T
*46A	Normal function	Normal function	Normal function	R26H, E155K, R296C, S486T
*45B	Normal function	Normal function	Normal function	E155K, R296C, S486T
*45A	Normal function	Normal function	Normal function	E155K, R296C, S486T
*39	Normal function	Normal function	Normal function	S486T
*35B	Normal function	Normal function	Normal function	V11M, R296C, S486T
*35A	Normal function	Normal function	Normal function	V11M, R296C, S486T

*34	Normal function	Decreased function	Normal function	R296C
*33	Normal function	Normal function	Normal function	A237S
*2M	Normal function	Normal function	Normal function	R296C, S486T
*2L	Normal function	Normal function	Normal function	R296C, S486T
*2K	Normal function	Normal function	Normal function	R296C, S486T
*2H	Normal function	Normal function	Normal function	R296C, S486T
*2G	Normal function	Normal function	Normal function	R296C, S486T
*2F	Normal function	Normal function	Normal function	R296C, S486T
*2E	Normal function	Normal function	Normal function	R296C, S486T
*2D	Normal function	Normal function	Normal function	R296C, S486T
*2C	Normal function	Normal function	Normal function	R296C, S486T
*2B	Normal function	Normal function	Normal function	R296C, S486T
*2A	Normal function	Normal function	Normal function	R296C, S486T
*27	Normal function	Normal function	Normal function	E410K
*1E	Normal function	Normal function	Normal function	
*1D	Normal function	Normal function	Normal function	
*1C	Normal function	Normal function	Normal function	
*1B	Normal function	Normal function	Normal function	