

**Table S1. List of primer sequences for the *TaTT* mutagenesis.**

Mutation	Primer	Sequence (from 5' to 3' end)
R43S	R43S.R	GTTCCAGTAACC <b>AGAG</b> GATACCTTCGAAGACC GC
	CheckR43S.F	GCGGTCTTCGAAGGTAT <b>CTC</b>
Y101F	Y101F.F	ACCGTGGCGATGTG <b>TTC</b> ATCATGCCGCTGGC
	CheckY101F.R	AAGCCAGCGGCATGAT <b>GA</b>
Y166W	Y166W.F	GCATTGGCCAAC <b>TGGG</b> CGTAATAGCCAGCTG
	CheckY166W.F	AAGGCATTGGCCAAC <b>TGG</b>
G41V +R43S	G41V&R43S.F	ACTGCGGTCTTCGAA <b>GTG</b> AT <b>CTCT</b> GGTTACT GG
	CheckG41V.F	ACTGCGGTCTTCGAA <b>GTG</b>
G41V +R43S+F39Y	F39Y&41V&43S.F	ACTGCGGT <b>CTAC</b> GAA <b>GTG</b> AT <b>CTCT</b> GGTTACT GG
	CheckF39Y&G41V.F	ACTGCGGT <b>CTAC</b> GAA <b>GTG</b>
S115R	S115R.R	TCACCAACAAC <b>ACG</b> GAATGCTTTGTTGCCCA
	Check S115R.R	GCGGTCACCAACAAC <b>ACG</b>
+A108	108+A.R	GCTTTGTTGCCAC <b>GGC</b> TGCATAAGCCAGCG GC
	Check108+A.F	GCCGCTGGCTTATGC <b>AG</b>
W32H	W32H.F	GACAGACTACTGG <b>CAT</b> GCGAGCGTTACTGC
	CheckW32H.F	CTGACAGACTACTGG <b>CAT</b>
	universal T7.F	TAATACGACTCACTATAGGG
	universal T7.R	TAGTTATTGCTCAGCGGTGG

Nucleotide substitutions are shown in bold.