

**Table S5.** Details of mutations identified on Tp5 antigenic epitope.

Sample group	9-mer Tp5 <sub>87-95</sub> (SKADVIAKY) epitope mutation details								
	Coverage	Alt#	Alt# (F;R)	Reference	Mutation call	Reference nucleotide position	Overall mutation score	Epitope variants	Function
Nakuru cattle	9,816	-	-	TP02_0767	None	-	-	SKADVIAKY	-
Mbarara cattle	29,503	3766	3352;414		G>AG	319	32.10	<del>N</del> KADVIAKY	Missense
Karamoja cattle	12,004	-	-		None	-	-	SKADVIAKY	-
Non-clinical <i>T. parva</i> -positive cases	8,269	-	-		None	-	-	SKADVIAKY	-
CD clinical cases	6,195	-	-		None	--		SKADVIAKY	-

**NB:** Detail on interpretation is provided in Table S1 footnotes.