

Table S2. Comparison of different methods to identify codons for which signal of positive selection (dN/dS ratio) is strongest. Significant positively selective codons have been calculated using OmegaMap (Wilson and McVean 2006), Selecton server (Stern et. al 2007) and CodeML (PAML, version 4.9d) (Zang 2017) and are marked with an X, the numbers represent the amino acid position in the MHC class II molecule.

Positively selected codons in Omegamap														
	11	13	27	28	34	37	47	57	60	63	70	71	74	78
Nothern cluster														
		X				X	X		X	X			X	
Southern cluster														
	X	X	X	X	X		X		X	X	X		X	X
Positively selected codons Selecton server														
Nothern cluster														
		X		X		X				X	X	X		
southern cluster														
	X	X			X	X	X		X	X	X	X		X
Positively selected codons CodeML (PALM)														
Nothern cluster														
Model 2		X	X	X		X	X	X	X	X	X	X	X	
Model 8		X	X	X		X	X			X	X	X		
southern cluster														
Model 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Model 8	X	X		X	X	X	X	X	X	X	X	X	X	X
Distance to Bondinas et. Al 2007	0	0	1	0	4	0	0	0	1	2	0	1	0	0