

Table S1. Independent test set with control peptide set selected from non-secreted proteins

	Long					Short				
	Spec	Sen	FPR	Q	MCC	Spec	Sen	FPR	Q	MCC
AntiBP2										
Non-secreted control	64.1	91.8	0.51			66.0	88.6	0.47		
Bioactive	85.2	48.5	0.08			82.2	53.6	0.11		
All				70.0	0.44				71.1	0.45
CAMP										
Non-secreted control	64.0	68.7	0.39			61.7	77.8	0.49		
Bioactive	65.7	60.8	0.31			69.4	51.2	0.22		
All				64.8	0.30				64.4	0.30
PeptideRanker										
Non-secreted control	85.9	89.0	0.15			73.2	84.2	0.31		
Bioactive	88.6	85.4	0.11			81.4	69.2	0.16		
All				87.2	0.74				76.7	0.54

Comparison of PeptideRanker (measured at a threshold of 0.5), CAMP and AntiBP2 tested on the independent test set. AntiBP2 did not return predictions for 234 (out of a total of 946) of the long and 392 (out of a total of 532) of the short peptides. CAMP did not return predictions for 6 of the long and 5 of the short peptides.