

Sensorgrams obtained for each replicate of peptide  $9 / Phd_{STm}^{52-73} V62A$  (analyte) binding to  $Doc_{STm}$  (ligand). Six concentrations of the analyte were flown over the surface in a single cycle, ranging from 50 nM to 0.206 nM (3-fold dilutions). The association and dissociation times were 80 s and 1000 s, respectively.

Summary of the fitted parameters obtained from each SPR measurement of peptide 9.

Replicate	kon (M-1 s-1)	koff (s-1)	K <sub>D</sub> (pM)	R <sub>MAX</sub> (RU)	tc (RU M <sup>-1</sup> s <sup>-1</sup> )	Chi <sup>2</sup> (RU <sup>2</sup> )	U-value
1	$1.798 \pm 0.011 \times 10^6$	$3.293 \pm 0.008 \times 10^{-4}$	183	$33.8 \pm 0.01$	$2.110 \pm 0.220 \times 10^{8}$	0.365	1
2	$1.649 \pm 0.002 \times 10^6$	$3.936 \pm 0.006 \times 10^{-4}$	239	$22.7 \pm 0.01$	$1.087 \pm 0.230 \times 10^{13}$	0.102	1
3	$3.350 \pm 0.015 \times 10^6$	$4.420 \pm 0.008 \times 10^{-4}$	132	$28.4 \pm 0.01$	$6.920 \pm 0.112 \times 10^7$	0.151	1