

Supplementary Table 1. Thrombin inhibition kinetic constants derived from non-linear fitting of progress curves as described in Methods (averaged over at least 3 readings with standard deviations reported).

	$K_i$	$k_{on} \times 10^{-8} \text{ (M}^{-1}\text{s}^{-1}\text{)}$	$k_{off} \times 10^5 \text{ (s}^{-1}\text{)}$
Sulfo-hirudin	$26 \pm 9.8$	$0.95 \pm 0.56$	$0.22 \pm 0.06$
Desulfo-hirudin	$307 \pm 72$	$0.38 \pm 0.07$	$1.18 \pm 0.45$