

## ATW0024

Aptamer to Laminin

### Selection Information

**Target for Selection:** Laminin from Engelbreth-Holm-Swarm murine sarcoma basement membrane; Sigma Catalog# L2020

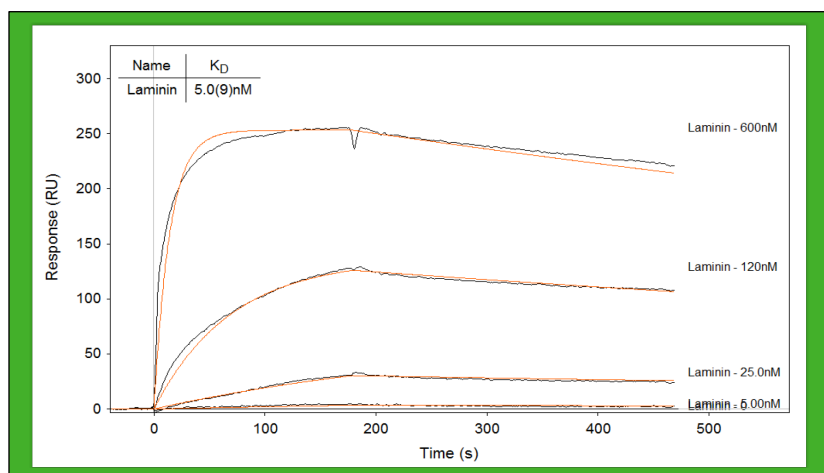
**Number of DNA Nucleotides:** 40

Aptamers were selected from a randomized Base Pair 40-mer DNA library against the target molecule. Proprietary methods were used to select this specific aptamer sequence.

### Affinity Determination

**Affinity Determination Method:** Surface Plasmon Resonance (SPR)

**Average  $K_D$ :**  $5.0 \pm .9$  nM



**Figure 1.** Overlaid fit of association and dissociation results of 3'-8AT biotinylated Laminin aptamer binding with Laminin protein concentrations of 600, 120, and 25 nM

	$k_a$ ( $M^{-1}s^{-1}$ )	$k_d$ ( $s^{-1}$ )	Rmax (RU)	$K_D$
Laminin	$1.16 \pm 0.01e5$	$6 \pm 0.1e-45$	$255.3 \pm 0.5$	$5.0 \pm 0.9$ nM

**Table 1.** Kinetics table showing rate and affinity constants obtained for 3'-8AT biotinylated Laminin aptamer binding to Laminin protein using the SensiQ system.

### Aptamer Folding and Dilution

For optimal binding, aptamers must be folded into their tertiary structure prior to use. Dilute to 10x working concentration in Folding Buffer, heat to 90-95°C for 5 minutes, then cool to room temperature (~15 minutes). Final application buffers used for dilution of aptamer to working concentration and washing should contain 1 mM MgCl<sub>2</sub>.