

## APTAMER INFORMATION

### Laminin -110 aptamer #203

#### 1a. Description:

- Identifiers: 110 (Oligo# 203)
- Number of DNA nucleotides: 40 bases (without 3'-8AT), 58 bases (with 3'-8AT)
- Molecular weight (includes 3'-8AT and biotin): 18,287.1 g/mol
- Target for selection: **Laminin, Sigma (Cat #L2020)**

Aptamer was selected from a randomized 40-mer library against Laminin. Proprietary methods were then used to select the aptamer.

#### Aptamer folding instruction before use:

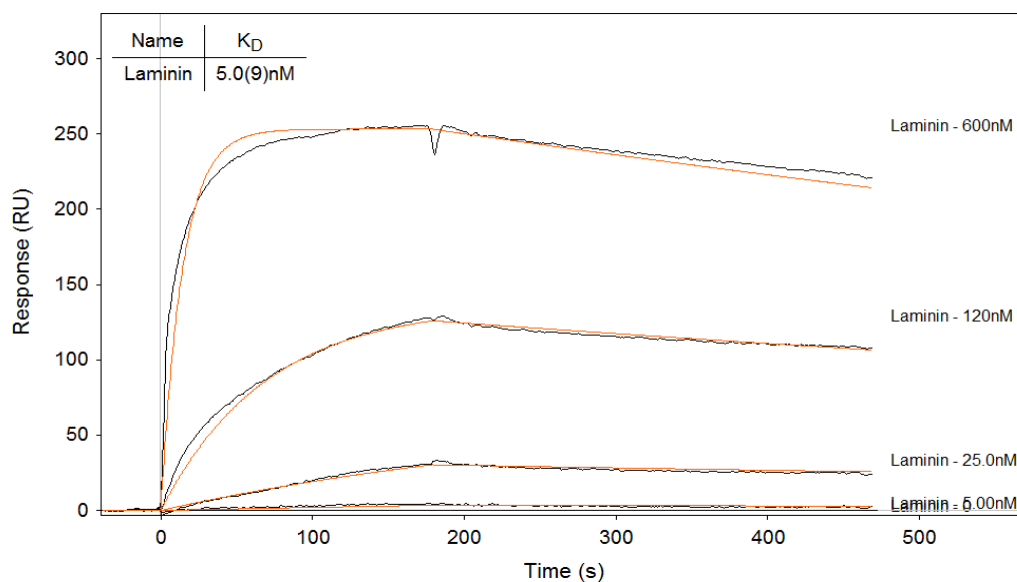
Once the aptamer is in its working concentration, it needs to be heated to 85-90 °C for 2 minutes, and then cooled to room temperature before use.

#### 1b. Validation data with hCG protein using surface plasmon resonance (SPR):

- Immobilized Ligand: Laminin aptamer #203 with 3'-8AT and biotin
- Analyte: Laminin
- By Kinetic Analysis (Qdat), avg  $K_d = 5.0 \pm 0.9$  nM

(non-linear regression, pseudo-first order 1:1 interaction, Levenberg-Marquardt algorithm):

Overlaid fit:



**Figure 1.** Overlaid fit of association and dissociation results of Laminin aptamer binding with Laminin protein concentrations of 600, 120, 25 nM;

	$k_a$ ( $M^{-1}s^{-1}$ )	$k_d$ ( $s^{-1}$ )	Rmax (RU)	$K_D$
<b>Laminin protein</b>	<b><math>1.16 \pm 0.01e5</math></b>	<b><math>6 \pm 1e-4</math></b>	<b><math>255.3 \pm 0.5</math></b>	<b><math>5.0 \pm 0.9</math> nM</b>

**Table 1.** Kinetics table showing rate and affinity constants obtained for Laminin aptamer binding to Laminin protein using the SensiQ system.