APTAMER INFORMATION

CD19 human aptamer #700

1a. Description:

- *Identifiers*: 5Xo2o:430:726 (Oligo #700)
- *Number of DNA nucleotides*: 32 bases
- *Molecular weight (includes 3′-bioTEG):* 10,344 g/mol
- *Target for selection:* **Recombinant CD19 human protein, Sino Biological Inc., (Cat# 11880-H08H).**

Aptamer was selected from a randomized 32-mer library against Human CD19 protein. 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 Human CD19 protein by BLI (Bio-Layer Interferometry) method::

- *Immobilized Ligand:* CD19 human aptamer #700 with 3′-bioTEG
- *Analyte:* CD19 human protein
- *Buffer used for validation:* 1X PBS, pH = 7.4

1c. Kinetics Screening Assay using Streptavidin Biosensors :

We validate the binding data by single reference method.

- Single reference data: All curves are referenced to a sensor dipped in buffer alone (no protein) (see Figures 1, 2 and Table 1).

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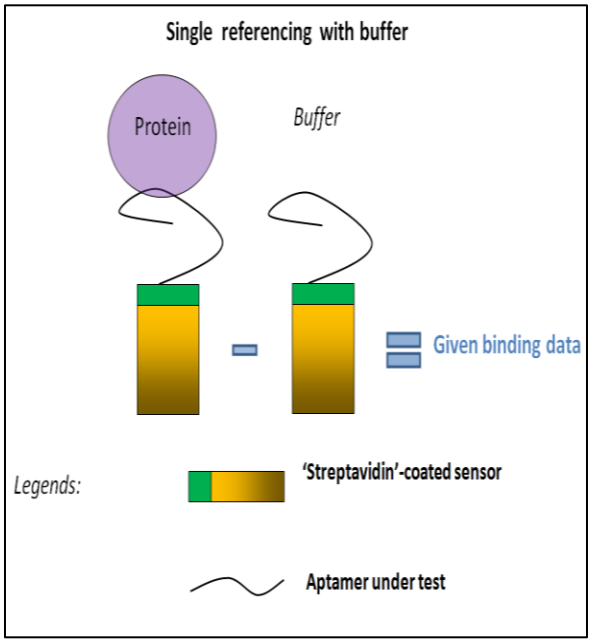

Figure1. Diagram showing aptamer: protein binding validation scheme.

1d. Single reference data:

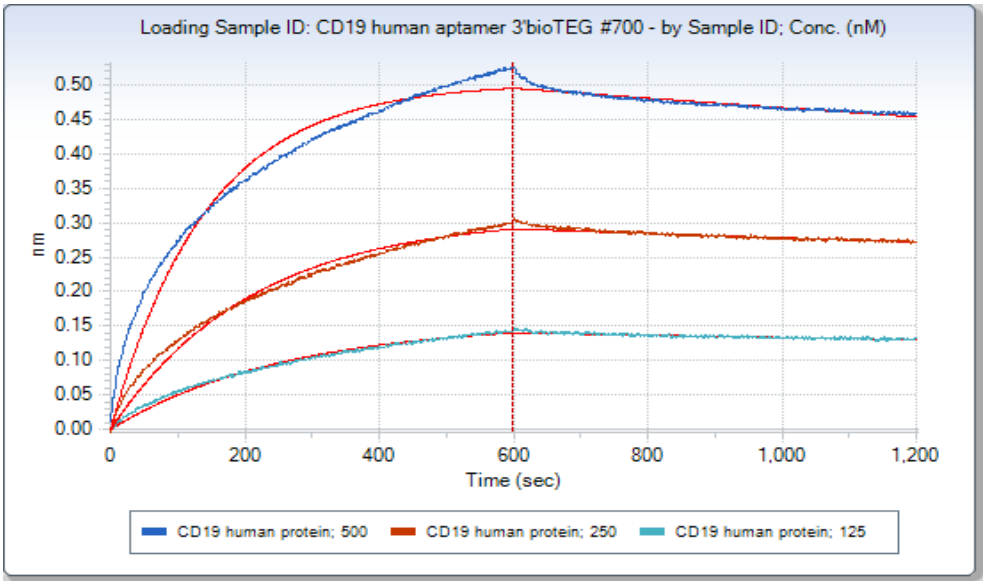

Figure 2. Association and dissociation graph of 1:1 fitting model of CD19 human aptamer #700 (biotinylated) to Human CD19 protein concentrations 500, 250 and 125 nM, by single reference method.

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Table 1. K_d, R^2 and Chi^2 values by Local fitting for Referenced data. **Avg Kd = 6.9 nM**

Immobilized Aptamer	Analyte	Conc. (nM)	Response	K_d (M)	Full X^2	Full R^2
CD19 human aptamer #700	CD19 human protein	500	0.5234	1.07E-08	0.344442	0.966429
CD19 human aptamer #700	CD19 human protein	250	0.2988	6.03E-09	0.06058	0.987658
CD19 human aptamer #700	CD19 human protein	125	0.1421	3.99E-09	0.008455	0.993518

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