



APTAMER INFORMATION

I. IL10 aptamer_5X020:947:1207 (oligo # 684)

I. a. Description:

- Identifiers: IL10_5X020:947:1207 (Oligo # 684)
- Number of DNA nucleotides: 32 bases
- Molecular weight (includes 3'bioTEG): 10,459.1 g/mol
- Target for selection: **Recombinant Human IL10, R&D systems [Cat# 217-IL].**

Aptamer was selected from a randomized 32-mer library against IL10 protein. Proprietary methods were then used to select the aptamer.

I. b. 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.

I. c. Validation data with IL10 protein:

- Immobilized Ligand: Biotinylated IL10 aptamer (Oligo #684)
- Analyte: Recombinant Human IL10, R&D systems [Cat# 217-IL].

I. d. Kinetics Screening Assay using Streptavidin Biosensors:

By single reference method, we validate the binding data.

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

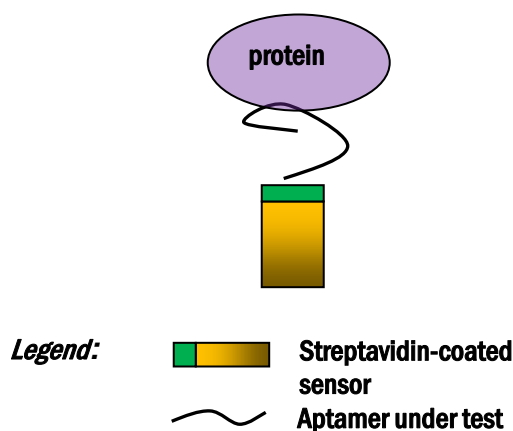


Figure1: Diagram showing aptamer: protein binding validation scheme.





I. e. Single reference data:

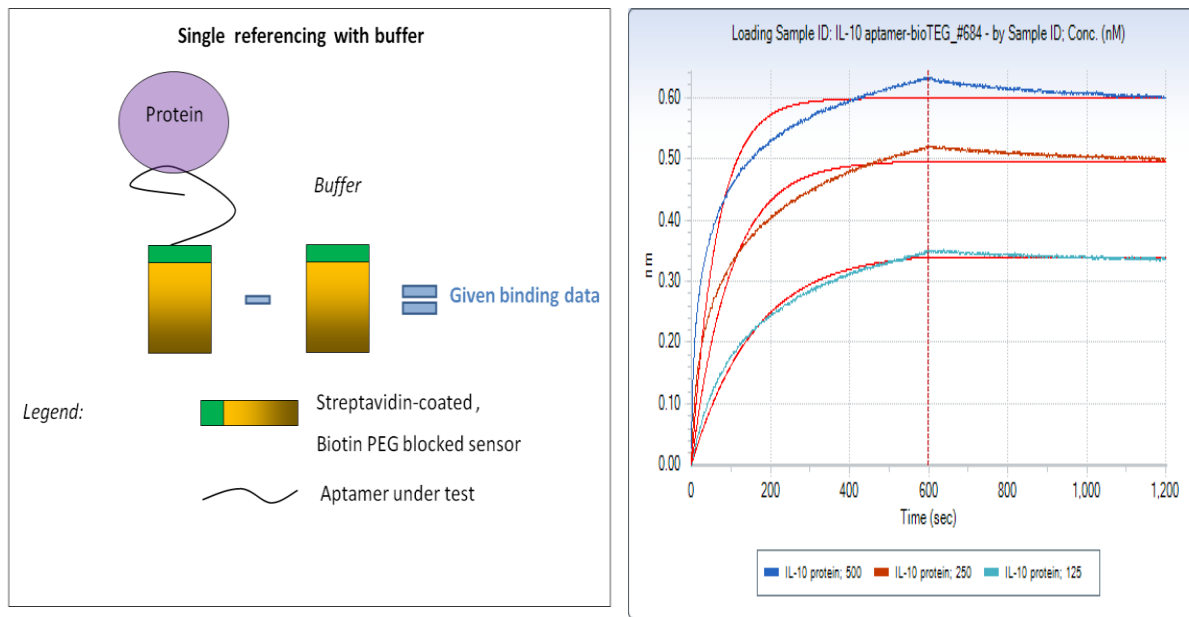


Figure 2. Association and dissociation graph of 1:1 fitting model of IL10 aptamer #684 (biotinylated) to IL10 protein concentrations 500, 250 and 125 nM, by single reference method.

Table 1. K_d , R^2 and χ^2 values by Local fitting for single reference method. **Avg $K_d = 48.8$ pM**

Immobilized Aptamer	Analyte	Conc. (nM)	Response	K_d (M)	Full X^2	Full R^2
IL-10 aptamer-bioTEG_#684	IL-10 protein	500	0.6308	2.29E-11	1.030759	0.864547
IL-10 aptamer-bioTEG_#684	IL-10 protein	250	0.5171	3.99E-11	0.552969	0.929376
IL-10 aptamer-bioTEG_#684	IL-10 protein	125	0.3463	8.36E-11	0.068534	0.988914

