

ATW0037

Aptamer to Human IL-10

Selection Information

Target for Selection: Recombinant human Interleukin-10 (IL-10) protein expressed in *Sf21* (baculovirius) Ser19-Asn178 R&D Systems, Cat# 217-IL

Number of DNA Nucleotides: 32

Aptamers were selected from a randomized Base Pair 32-mer DNA library against the target molecule. Proprietary methods were used to select this specific aptamer sequence.

Affinity Determination

Affinity Determination Method: Bio-Layer Interferometry analysis (BLI)

Buffer Used for Affinity Determination: 20mM TRIS, 100mM NaCl, 0.005% Tween 20 in nucleic acid-free water, pH 7.4

Aptamer Modification for Affinity Determination:
3' Bio-TEG spacer and biotin

Average K_D : 0.049 nM

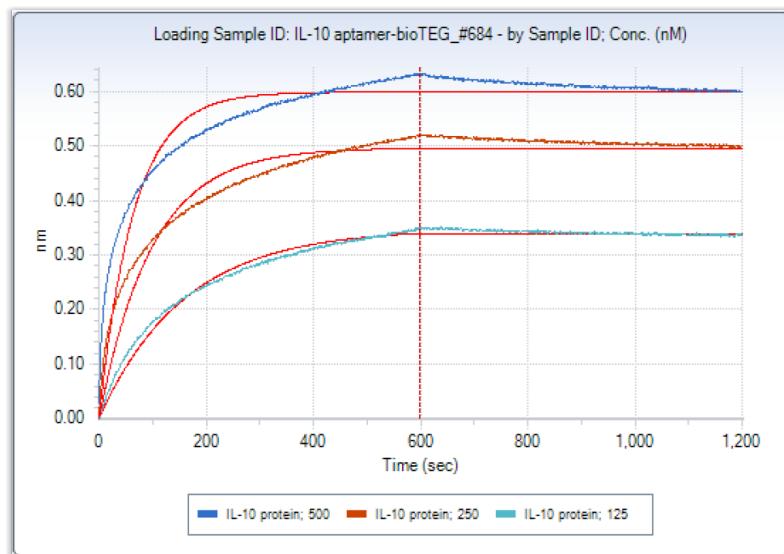


Figure 1. Aptamer-IL-10 Binding

Association and dissociation graph of 1:1 fitting model of IL-10 aptamer to IL-10 concentrations 500, 250 and 125 nM, by single reference method

Table 1. K_D and χ^2 values by local fitting for single reference method. Avg K_D = 48.8 pM

Immobilized Aptamer	Target	Conc (nM)	Response	K_D (M)	Full χ^2	Full R^2
IL-10 Aptamer-bioTEG	IL-10	500	0.6308	8.29E-11	1.030759	0.864547
IL-10 Aptamer-bioTEG	IL-10	250	0.5171	3.99E-11	0.552969	0.929376
IL-10 Aptamer-bioTEG	IL-10	125	0.3463	8.36E-11	0.068534	0.988914

Aptamer Folding

For optimal binding, aptamers must be folded into their tertiary structure prior to use. Dilute to 10x - 100x working concentration in Folding Buffer, heat to 90-95°C for 5 minutes, then cool to room temperature (~15 minutes)