

## ATW0037

Aptamer to Human IL-10

### Selection Information

**Target for Selection:** Recombinant human Interleukin-10 (IL-10) protein expressed in Sf21 (baculovirus) 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.

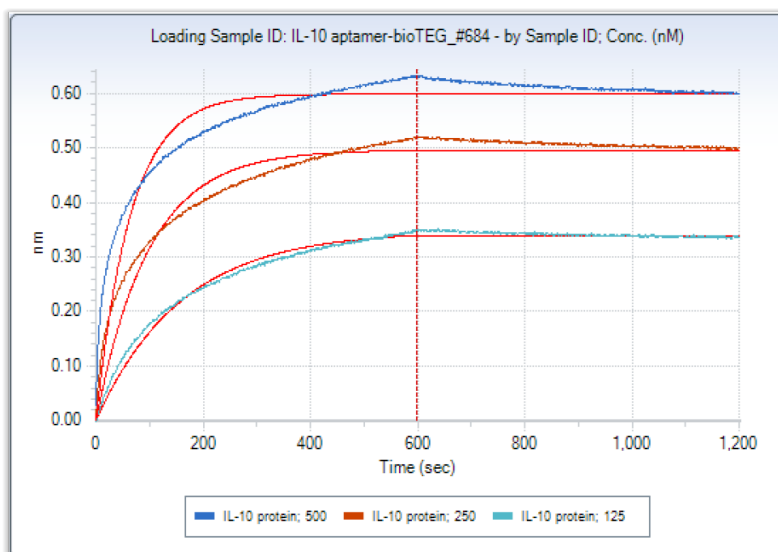
### Affinity Determination

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

**Buffer Used for Affinity Determination:** 20mM TRIS, 100mM NaCl, 0.005% Tween 20 in nuclease-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  $\chi^2$  values by local fitting for single reference method. Avg  $K_D$  = 48.8 pM**

Immobilized Aptamer	Target	Conc (nM)	Response	$K_D$ (M)	Full $X^2$	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)