

ATW0100

Aptamer to Citrulline

Selection Information

Target for Selection: L-Citrulline, Sigma# C7629

Number of DNA Nucleotides: 70 (with primer regions)

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: Microscale Thermophoresis analysis (MST)

Aptamer Modification for Affinity Determination: Cy5 Label

Buffer Used for Affinity Determination: 1 x PBS, 1mM MgCl₂, 0.05% Tween 20, pH 7.4

Average K_d: 4,961 nM

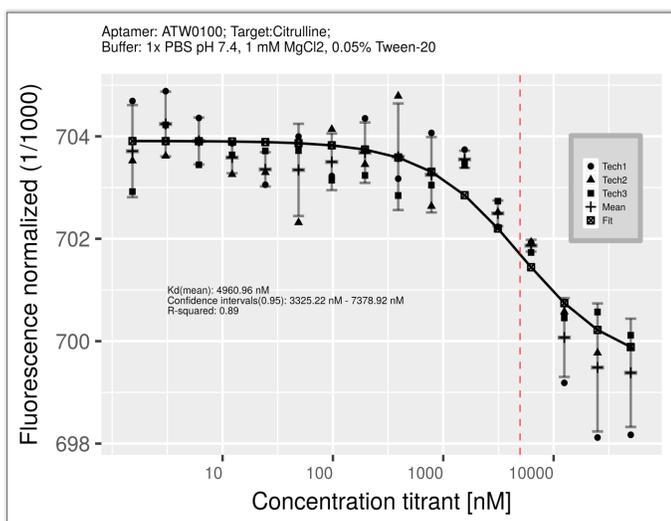


Figure 1. Aptamer-Citrulline Binding

The normalized fluorescence is plotted versus the titrated target concentration, $R^2 = 0.89$

Aptamer Folding

For optimal binding, aptamers must be folded into their tertiary structure prior to use. Dilute to 10x working concentration in Folding Buffer, heat to 90-95°C for 5 minutes, then cool to room temperature (~15 minutes). Final application buffers used for dilution of aptamer to working concentration and washing should contain 1 mM MgCl₂.