BasePair Biotechnologies, Inc.

MRSA Aptamer Data Sheet

ATW0032

Aptamer to PBP2a

Selection Information

Target for Selection: Recombinant *Staphylococcus aureus* Penicillin-binding protein 2a, PBP2a, Ray Biotech Cat# 230-00051

Number of DNA Nucleotides: 70 (with primer regions)

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

Affinity Determination

Affinity Determination Method: Back-Scattering Inferometry (BSI)

Buffer Used for Affinity Determination: 1 x PBS, 1mM $MgCl_2$, in nuclease-free water, pH 7.4

Average K_D: 2.0 ± 0.2 nM

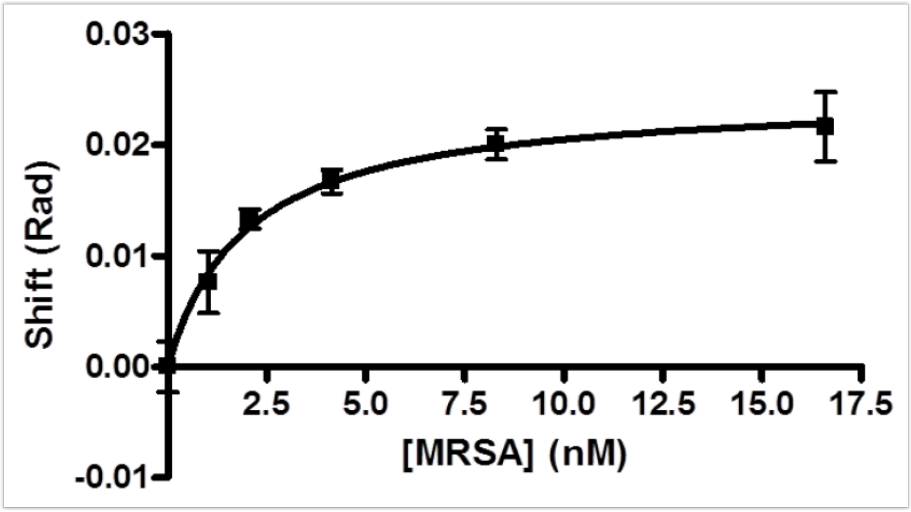

Figure 1. Aptamer-MRSA Binding

The BSI response is plotted versus the titrated target concentration of methicillin-resistant *S. aureus* (MRSA). The values are the mean values from three independent measurements.

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.