

## ATW0067

### APTAMER INFORMATION

#### Tenofovir

##### Description:

- Identifiers: TFV G2:125:256 11.85 BTVM1
- Number of DNA nucleotides: 32 bases
- Target for selection: Tenofovir (TFV), provided by customer (<http://en.wikipedia.org/wiki/Tenofovir>)

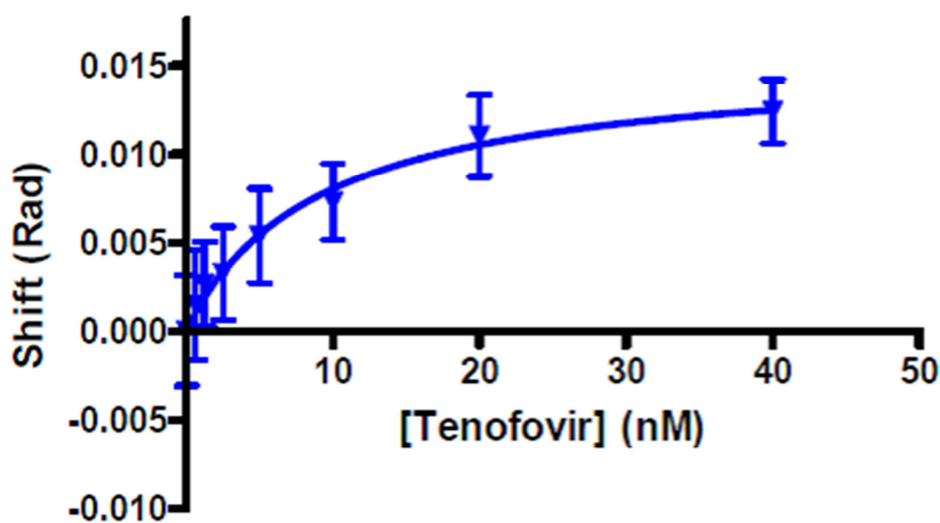
Aptamer was proudly selected at Base Pair by M.S. from a randomized 32-mer DNA library against TFV. Proprietary methods were then used to select the aptamer.

##### 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.

##### Validation data with TFV by Back-Scattering Interferometry (BSI) method:

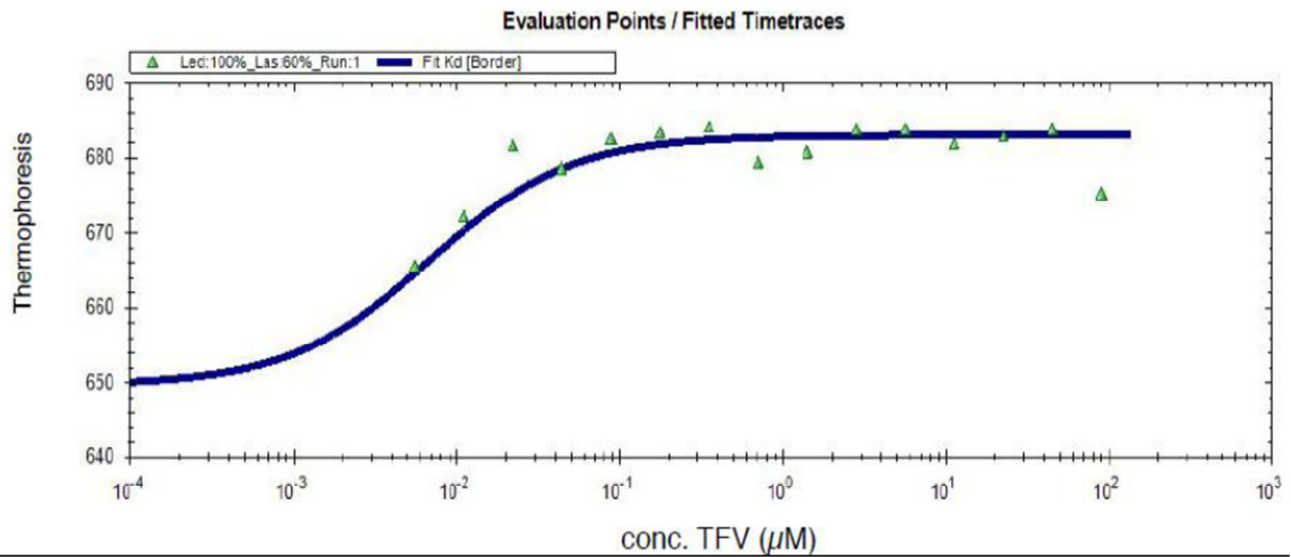
- Buffer used for validation: 1X PBS, pH = 7.4, 1 mM MgCl<sub>2</sub>
- Average  $K_d$  = 9.0 ± 1.4 nM



**Figure 1.** Aptamer-TFV binding. The shift in the spatial position of the fringes is plotted versus the titrated TFV concentration. The values are the mean values from three independent measurements

##### Validation data with TFV by Microscale Thermophoresis (MST) method:

- Buffer used for validation: 1X PBS, pH = 7.4, 1 mM MgCl<sub>2</sub>
- Average  $K_d$  = 1 nM



**Figure 1.** Aptamer-TFV binding. The thermophoresis is plotted versus the titrated TFV concentration.

Note that the discrepancy in  $K_d$  values may be due to working mechanisms of the two analysis techniques.