

**Supplementary Table 1. Estimate of aptamer affinities for tFKBP\*3R-2G**

<b>Aptamer</b>	<b><math>K_d</math> (nM)</b>	<b>Sequence of Variable Region</b>
s4	79.6 ± 2.6	UACUAUAGGAUGGUCAGGGUCUGACCAACGGUGGGUGGUGAGAGCUAUAGUUGGUGGUC
s5	57.2 ± 6.9	UUGCAGGCCGGUAUGAACGGUCGGGGGGUUGGUACGCGUCGCGGUAGGCGGGCCGGUCAU
s6	314 ± 3	GAAAAUUUAAUGCGUUGGUAUUGGUUGGGGAUUGUCAAUUGUUACUCAGGAAUACGUACGGG
s8	132 ± 29	UCGCGUUAGACGUGGUAAAUGGGACUCGCUCUGAGUUUAGACCUGGGUGGUGCGUUGGCCG
s11	< 5	GAUUUAAGUUAAAGAGGGAGGGUCAUGUGUGCCGGUGUGAUGCGGUACUGAUCCAAG
s14	< 5	UUGGUGUGGGCGUGACUAUCUCGGGUCUUUUGGGGAUAGUAUGGAAUGAUGAUCCUUGUGC
s16	10.5 ± 1.9	GGUGACUGCGGCGGCGGCGAUUCGCUAUCCCCGGGUAUUAUGCUUCUGGAUCUACUCUGU
s20	8.9 ± 4.9	UAGAGUGGUGAAGCGGGAUGUGAUUUUCAAGUUCGUUUGGACCAAGAGGCAGAGCCAAC
s23	< 5	UCAUUUCAUUGUGGCGGGUCAGUCAAAUGUGAUGCUUCGUUCAGUGACGGGAGGGUUGUGAG
s25	< 5	AGCGGUGGGUUGCUGAGGCUUUGGAAAGUGUGCAAAGUGCUUUGUGUCGUAUCCGGUGU
s28	< 5	AAGAUGGCGGGUGGAGUAUGGCUUUCGGCGGUAUGCCGUGUGGAGAAGUAUGUUCAGUGGUCCU
s29	< 5	AGUAUGCAUCCGGAGUUAGACUCCGAUGGUGGCGAGGGCGUGGUAGACUGGGUGCGAU
s30	< 5	UCACGGAUGCAGAGGACGGAUGGAGCCAGGUGAAAAGGAUUGGCUGAGUAGCUGUGACGA
s34	< 5	AAUGGUGGUAAGUGGGUGGCUGCUUAGGGGCUUGAGAAACGAGUUCCAAGGCAGGUGUGU
s36	< 5	AUUUGAUGUUUUGGUUAUGUCCAGACCGUACCCUACAGUGGUGGCAUGUGGCGNGUGGUUA
s44 <sup>a</sup>	< 5	UUCGCGAGCCUAACGUUUAGGAGGGUAUGAAGUAUAUGGUGGAAGGGGACAGUUUCAUA

Duplicate nitrocellulose filter binding assays with the 16 RNA aptamers and tFKBP\*3R-2G were quantified and binding affinities were calculated. <sup>a</sup>The  $K_d$  for s44 represents only one measurement.