

Aptamers in Education: Undergraduates Make Aptamers and Acquire 21st Century Skills Along the Way

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Table S1: Anti-CIAP RNA Aptamer Sequences, text file. The bold sequences identify the former “random region” of the original N50 RNA pool and the non-bold/regular-type sequences identify the static regions designed for primer annealing. Note the presence of an R (i.e. A or G) in the VDH 2.14 motif and the presence of a W (i.e. A or T) in aptamer clone 4-9.

N50 RNA Pool, 97 nt: 5'GGGUUUACCUAGGUGUAGAUGCU-N50-AAGUGACGUCUGAACUGCUUCGAA3'
N50 Pool Forward Primer, “42.N50.F”, 42 nt: 5'GATAATACGACTCACTATAGGGTTTACCTAGGTGTAGATGCT3'
N50 Pool Reverse Primer, “24.N50.R”, 24 nt: 5'TTCGAAGCAGTTCAGACGTCACCT3'
Motif VDH 2.14, 14 nt: GAACUCAACAUAAAR
Aptamer Clone 4-3, 97 nt, 5 nM Kd: 5'GGGUUUACCUAGGUGUAGAUGCUGUAUUAUAGCGAACUCAACAUAAAGGUAUAAUUACAA UUUCUAUACUUCUUAAGUGACGUCUGAACUGCUUCGAA3'
Aptamer Clone 4-9, 97 nt, 9.4 nM Kd: 5'GGGUUUACCUAGGUGUAGAUGCUUCWAUUGAUUAUGUUAUAACUGAACUCAACAUAAAG GAUAUGAUGUAUGAUCAAGUGACGUCUGAACUGCUUCGAA3'
Aptamer Clone 3-6, 97 nt, 10.8 nM Kd: 5'GGGUUUACCUAGGUGUAGAUGCUCUGCCCUUCAGAUUUUUCGAUGACCGUUGAACUCA ACAUAAAGACCUUCCAAGUGACGUCUGAACUGCUUCGAA3'
Minimized Aptamer Variant 3.1, 55 nt, 6.7 nM Kd: 5'GGGUAGAUGCUGUAUUAUAGCGAACUCAACAUAAAGGUAUAAUUACAAUUUCUACCC3'