

MAGNETICALLY ACTUATED LOAD OF FUNCTIONAL RNA NANOPARTICLES

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Experimental Supplementary Information

RNA sequences:

DNA Cube

5' GGCAACTTTGATCCCTCGGTTTAGCGCCGGCCTTTCTCCCACACTTTACG
5' GGGAAATTCGTGGTAGGTTTTGTTGCCGTGTTCTACGATTACTTTGGTC
5' GGACATTTTCGAGACAGCATTTTTCCCGACCTTTCGGATTGTATTTAGG
5' GGCGCTTTGACCTTCTGCTTATGTCCCCTATTTCTAATGACTTTGGCC
5' GGGAGATTTAGTCATTAAGTTTTACAATCCGCTTTGTAATCGTAGTTTGTGT
5' GGGATCTTTACCTACCAGTTTTGCTGTCTCGTTGCAGAAGGTCTTTCCGA

RNA Ring

5' GGGAACCGUCCACUGGUUCCCGCUACGAGAGCCUGCCUCGUAGC
5' GGGAACCGCAGGCUGGUUCCCGCUACGAGAGAACCUCUGUAGC
5' GGGAACCGCGUUCUGGUUCCCGCUACGAGACGUCUCCUCGUAGC
5' GGGAACCGAGACGUGGUUCCCGCUACGAGUCGUGGUCUGUAGC
5' GGGAACCAACGAGGUUCCCGCUACGAGAACCAUCCUCGUAGC
5' GGGAACCGAUGGUUCCCGCUACGAGAGUGGACCUCGUAGC

GFP Cube

5' GGCAAUUUUGAUCCUCUGUUUAGCGCCGGCCUUUUCUCCACACUUUCACGUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAAAUUUCGUGGUAGGUUUUGUUGCCCGUGUUUCUACGAUUACUUUGGUUCUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGACAUUUUCGAGACAGCAUUUUUCCCGACCUUUGCGGAUUUAUUUAGGUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGCGCUUUUGACCUUCUGCUUUUUGUCCCUAUUUUCUAAUGACUUUUGGCCUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAGAUUUAGUCAUUAGUUUUACAAUCCGCUUUUGUAAUCGUAGUUUGUGUUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAUUUUACCUACCAGUUUUGCUGUCUCGUUUUGCAGAAGGUUUUCCGAUUCGGUGGUGCAGAUGAACUUCAGGGUCA

GFP Ring

5' GGGAACCGUCCACUGGUUCCCGCUACGAGAGCCUGCCUCGUAGCUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAACCGCAGGCUGGUUCCCGCUACGAGAGAACCUCUGUAGCUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAACCGCGUUCUGGUUCCCGCUACGAGACGUCUCCUCGUAGCUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAACCGAGACGUGGUUCCCGCUACGAGUCGUGGUCUCGUAGCUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAACCAACGAGGUUCCCGCUACGAGAACCAUCCUCGUAGCUUCGGUGGUGCAGAUGAACUUCAGGGUCA
5' GGGAACCGAUGGUUCCCGCUACGAGAGUGGACCUCGUAGCUUCGGUGGUGCAGAUGAACUUCAGGGUCA

GFP Sense

5' pCAUUAACGAGCUGCUUAAUGACGA

“p” denotes phosphate on the 5'

GFP Sense with Alexa 488

5' pCAUUAACGAGCUGCUUAAUGACGA-Alexa488

GFP Anti-Sense

5' CGGUGGUGCAGAUGAACUUCAGGGUCA

DNA-Sense-AI488

5' GGAGACCGTGACCGGTGGTGCAGATGAACTTCAGGGTCATT-Alexa488

DNA-Anti-Sense-Iowa Black

5' Iowa Black Quencher - TGACCCTGAAGTTCATCTGCACCACCGGTACGGTCTCC

DNA-Anti-Sense

5' TGACCCTGAAGTTCATCTGCACCACCGGTACGGTCTCC