

Supplementary Information

Title:

Change in lipofectamine carrier as a tool to fine-tune immunostimulation of nucleic acid nanoparticles

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Sequences used in this project

DNA Cubes

	Sequence	#NTs	MW (g/mole)
5'	GGCAACTTTGATCCCTCGGTTTAGCGCCGGCCTTTCTCCACACTTTCACG	52	15784.2
5'	GGGAAATTTCTGTTAGGTTTTGTTGCCGTGTTTCTACGATTACTTTGGTC	52	16074.4
5'	GGACATTTTCGAGACAGCATTTTTCCCGACCTTTCGGATTGTATTTAGG	52	15996.4
5'	GGCGCTTTTGACCTTCTGCTTTATGTCCCTATTTCTTAATGACTTTTGGCC	52	15825.2
5'	GGGAGATTTAGTCATTAAGTTTTACAATCCGCTTTGTAATCGTAGTTTGTGT	52	16074.5
5'	GGGATCTTTACCTACCACGTTTTGCTGTCTCGTTTGCAGAAGGTCTTCCGA	52	15933.3

RNA Cubes

	Sequence	#NTs	MW (g/mole)
5'	GGCAACUUUGAUCCUCGGUUUAGCGCCGGCCUUUUCUCCACACUUUCACG	52	16391.7
5'	GGGAAAUUUCGUGGUAGGUUUUGUUGCCCGUGUUUCUACGAUUACUUUGGUC	52	16597.8
5'	GGACAUUUUCGAGACAGCAUUUUUCCCGACCUUUGCGGAUUGUAUUUUAGG	52	16547.8
5'	GGCGCUUUUGACCUUCUGCUUUUAGUCCCUAUUUUCUAAUGACUUUUGGCC	52	16334.6
5'	GGGAGAUUUAGUCAUUAAGUUUUACAACCGCUUUGUAUCGUAGUUUGUGU	52	16597.8
5'	GGGAUCUUUACCUACCACGUUUUGCUGUCUGUUUGCAGAAGGUCUUUCCGA	52	16498.8

RNA Rings

	Sequence	#NTs	MW (g/mole)
5'	GGGAACCGUCCACUGGUUCCCGCUACGAGAGCCUGCCUCGUAGC	44	14062.5
5'	GGGAACCGCAGGCUUGGUUCCCGCUACGAGAGAACGCCUCGUAGC	44	14188.6
5'	GGGAACCGCGUUCUGGUUCCCGCUACGAGACGUCUCCUCGUAGC	44	14040.4
5'	GGGAACCGAGACGUGGUUCCCGCUACGAGUCGUGGUCUCGUAGC	44	14183.5
5'	GGGAACCACACGAGGUUCCCGCUACGAGAACCAUCCUCGUAGC	44	14076.5
5'	GGGAACCGAUGGUUGGUUCCCGCUACGAGAGUGGACCUCGUAGC	44	14207.5

RNA Fibers

	Sequence	Strand	#NTs	MW (g/mole)
5'	GGGAAUCCAAGGAGGCAGGAUUCGUCACAGAAGGAGGCACUGUGAC	1	48	15609.5
5'	GGGAACGUAAGCCUCCAACGUUCCCGAUGCUAAGCCUCCAAGCAUCC	HIV 2	48	15323.3

AF488-DNA cubes

	Sequence	#NTs	MW
5'	GGCAACTTTGATCCCTCGGTTTAGCGCCGGCCTTTCTCCACACTTTCACG	52	15784.2
5'	GGGAAATTTCTGTTAGGTTTTGTTGCCGTGTTTCTACGATTACTTTGGTC	52	16074.4
5'	GGACATTTTCGAGACAGCATTTTTCCCGACCTTTCGGATTGTATTTAGG	52	15996.4
5'	GGCGCTTTTGACCTTCTGCTTTATGTCCCTATTTCTTAATGACTTTTGGCC /3A _{lex} F488N/-3'	52	16552.9
5'	GGGAGATTTAGTCATTAAGTTTTACAATCCGCTTTGTAATCGTAGTTTGTGT	52	16074.5
5'	GGGATCTTTACCTACCACGTTTTGCTGTCTCGTTTGCAGAAGGTCTTCCGA	52	15933.3

AF488-RNA cubes

	Sequence	#NTs	MW (g/mole)
5'	GGCAACUUUGAUCCUCGGUUUAGCGCCGGCCUUUUCUCCACACUUUCACG	52	16391.7
5'	GGGAAAUUUCGUGGUAGGUUUUGUUGCCCGUGUUUCUACGAUUACUUUGGUC	52	16597.8
5'	GGACAUUUUCGAGACAGCAUUUUUCCCGACCUUUGCGGAUUGUAUUUUAGG	52	16547.8
5'	GGCGCUUUUGACCUUCUGCUUUUAGUCCCUAUUUUCUAAUGACUUUUGGCC /3A _{lex} F488N/-3'	52	17062.2
5'	GGGAGAUUUAGUCAUUAAGUUUUACAACCGCUUUGUAUCGUAGUUUGUGU	52	16597.8
5'	GGGAUCUUUACCUACCACGUUUUGCUGUCUGUUUGCAGAAGGUCUUUCCGA	52	16498.8

AF488-RNA rings

	SEQUENCE	#NTs	MW (g/mole)
5'	GGGAACCGUCCACUGGUUCCCGCUACGAGAGCCUGCCUCGUAGC	44	14062.5
5'	GGGAACCGCAGGCUUGGUUCCCGCUACGAGAGAACGCCUCGUAGC	44	14188.6
5'	GGGAACCGCGUUCUGGUUCCCGCUACGAGACGUCUCCUCGUAGC/3A _{lex} F488N/-3'	44	14768.0

5'	GGGAACCGAGACGUGGUUCCCGCUACGAGUCGUGGUCUCGUAGC	44	14183.5
5'	GGGAACCACCACGAGGUUCCCGCUACGAGAACCAUCCUCGUAGC	44	14076.5
5'	GGGAACCGAUGGUUGGUUCCCGCUACGAGAGUGGACCUCGUAGC	44	14207.5

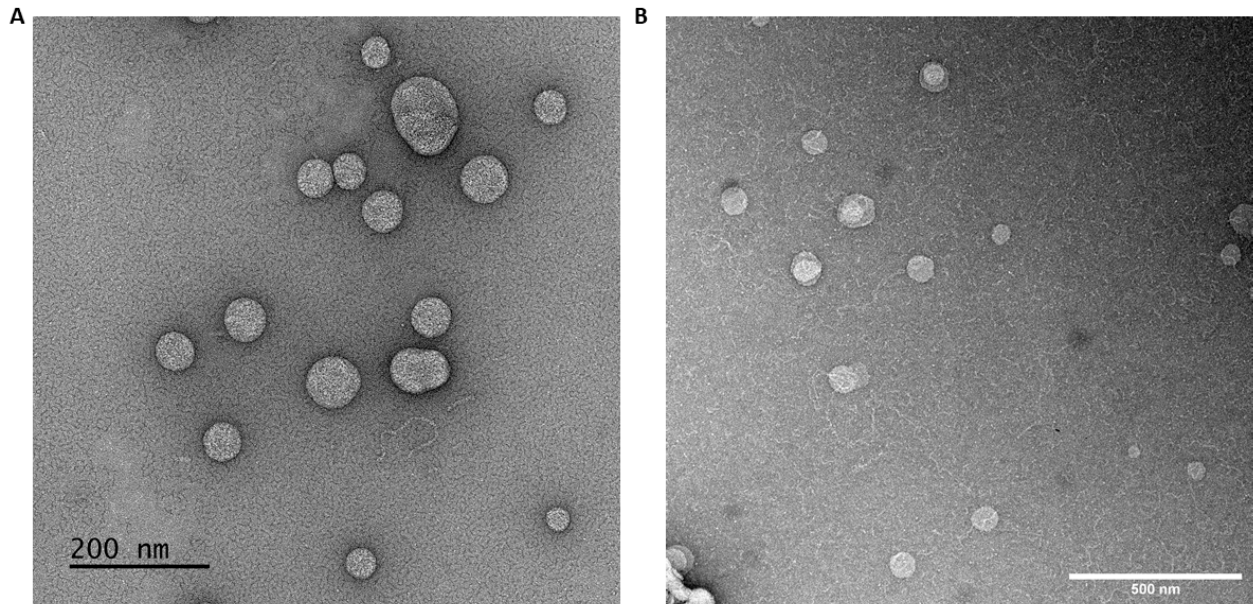


Figure S1. Comparison of lipofectamine 2000 (L2K) morphology by TEM performed using different grids. (A) L2K was deposited on a carbon-coated 400 mesh Cu/Rh grid and stained with 1% Uranyl Acetate from Polysciences, Warrington, PA, USA; the images were obtained using FEI Talos L120C TEM with Gatan 4k x 4k OneView camera. (B) L2K was deposited on a glow-discharged carbon-coated 200 mesh Cu grid and stained using 1% Uranyl Acetate from EMS, Hatfield, PA, USA; the images were obtained using FEI Tecnai T20 transmission electron microscope operating at 200 kV with a Gatan 2k X 2k Eagle camera. Other details of sample preparation were the same for image A and B as described in materials and methods.