Supporting information for

Peptides Containing Blocks of Different Charge Densities Facilitate Cell Uptake of Oligonucleotide

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Table S1: Effective charge of the peptides as calculated by JaMBW 1.1

Peptide	Sequence	Isoelectric point	Effective charges
$(KKKK)_5$	Ac-KKKK KKKK KKKK KKKK KKKK-amide	11.74	19
$(KGKG)_5$	Ac-KGKG KGKG KGKG KGKG KGKG-amide	11.44	10
$(KGGG)_5$	Ac-KGGG KGGG KGGG KGGG KGGG-amide	11.10	5
$(KKKK)_5$-*b*-$(KGKG)_5$	Ac-KKKK KKKK KKKK KKKK KKKK GKGK GKGK GKGK GKGK GKGK-amide	11.93	29
$(KKKK)_5$-*b*-$(KGGG)_5$	Ac-KKKK KKKK KKKK KKKK KKKK GGGK GGGK GGGK GGGK GGGK-amide	11.85	24

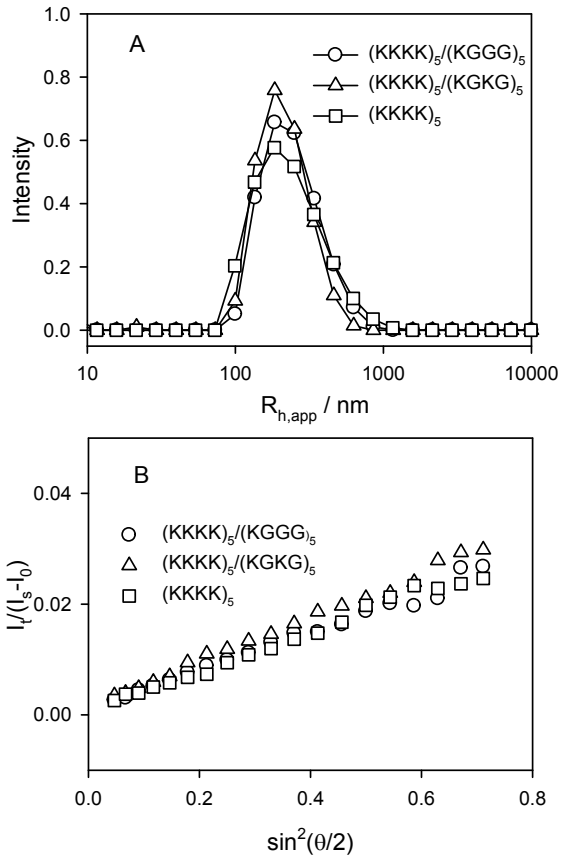
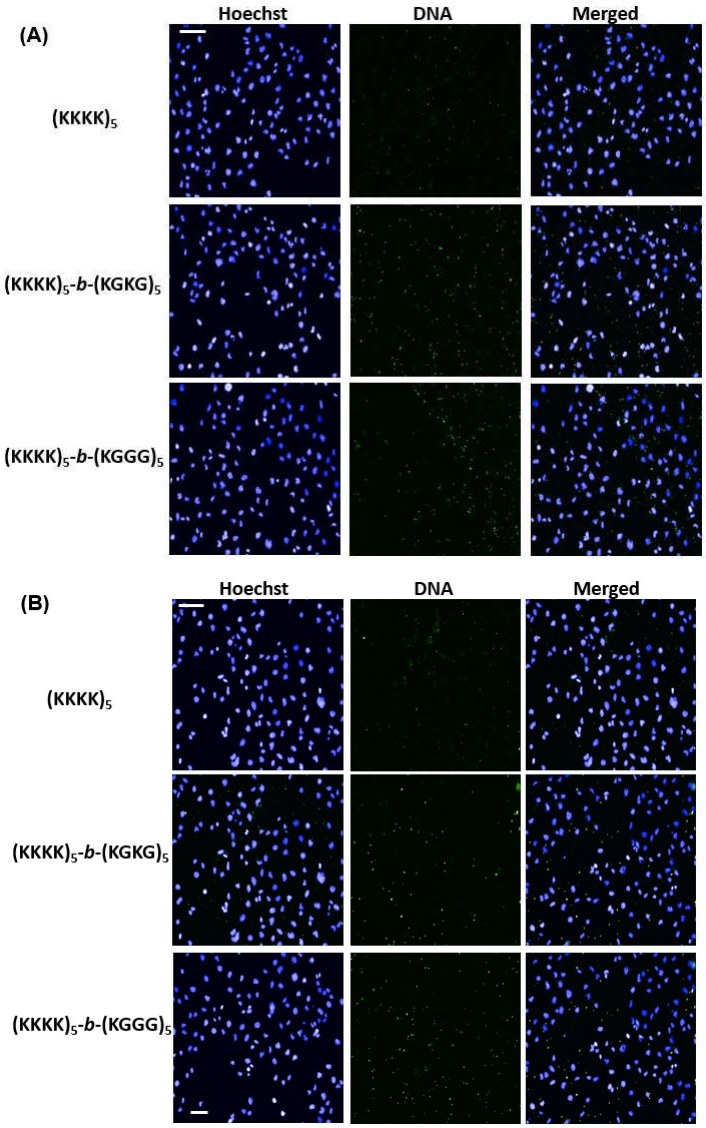


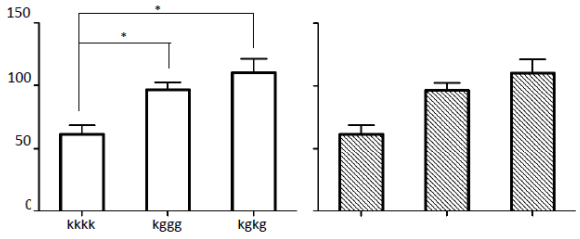
Figure S1. The size distribution (A) and the angular dependence of the inversed excess scattered intensity (B) of the complexes. The complexes were formed by mixing a 21 bp ds-oligo with $(KKKK)_5$ peptide, the mixture of $(KKKK)_5/(KGGG)_5$ or $(KKKK)_5/(KGKG)_5$, at a +/- ratio of 6.4. $c(KKKK)_5 = c(KGGG)_5 = c(KGKG)_5 = 5.0\times10^{-6}$ g/mL, c(oligonucleotide) $= 1.0\times10^{-5}$ g/mL.

Confocal microscopy images of cell uptake



+/- 3

	KKKK N/P=3		KGGG N/P=3		KGKG N/P=3
a1	53.35700635	a2	107.2413126	a3	98.43345932
a1	75.79312823	A2	88.31810902	a3	131.4916976
a1	55.50490959	a2	94.0833626	a3	100.4184499
		P=0.0182		P=0.0196	



*<0.05 **<0.01

+/- 9

	KKKK N/P=9		KGGG N/P=9		KGKG N/P=9
b1	57.71	b2	69.72861602	b3	93.92985066
b1	47.00132173	b2	76.76972163	b3	99.99322364
b1	49.62391041	b2	69.7038451	b3	108.0787876
b1	61.66087594	b2	95.09141768	b3	80.74738295
		P=0.0136		p=0.0008	

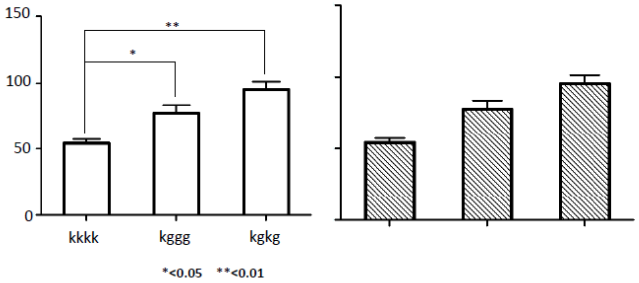


Figure S2. Confocal microscopy images of cell uptake of the oligonucleotide via peptides. Hoechst 33342 counterstaining was used to indicate nuclei (blue) and oligonucleotide was labeled by FITC (green). Oligonucleotide amount: 100ng/well, +/- = 3.0 (A) +/- = 9.0 (B), scale bar: 10 μm. The statistical analysis at corresponding charge ratios are also attached.