**AR-23 derivatives with high endosomal disrupting ability enhance Poly(L-lysine)-mediated gene transfection**

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**Figure s1.** Agarose gel electrophoresis of PLL/DNA and PEI/DNA/peptide; the peptide was added at different concentrations as indicated behind the peptide. 1. Marker; 2. DNA (Plasmid); 3. PLL/DNA; 4. PLL/DNA + AR-23 (2.5 µM); 5. PLL/DNA + aAR1 (10 µM); 6. PLL/DNA + aAR2 (20 µM); 7. PLL/DNA + aAR3 (40 µM).



**Figure s2.** Transfection efficiency of PLL/DNA and PLL/DNA/peptide in HEK-293 cells, images were acquired with an inverted fluorescence microscope (scale bar = 50 µm). A. PLL/DNA; B. PLL/DNA + AR-23 (2.5 µM); C. PLL/DNA + aAR3 (5 µM); D PLL/DNA + aAR2 (20 µM); E. PLL/DNA + aAR3 (40 µM); F. Lipfectamine 2000.