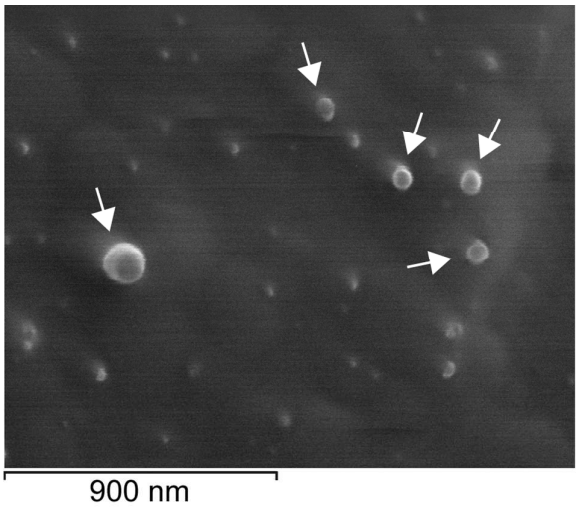
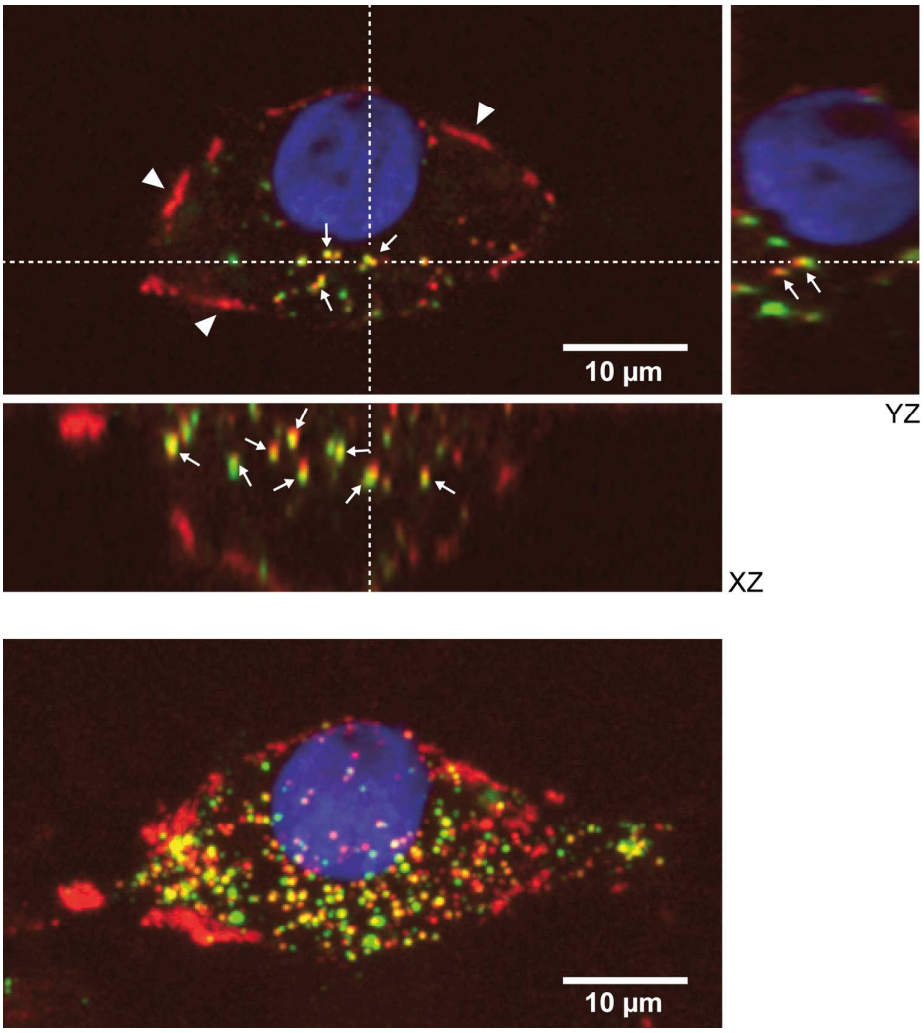
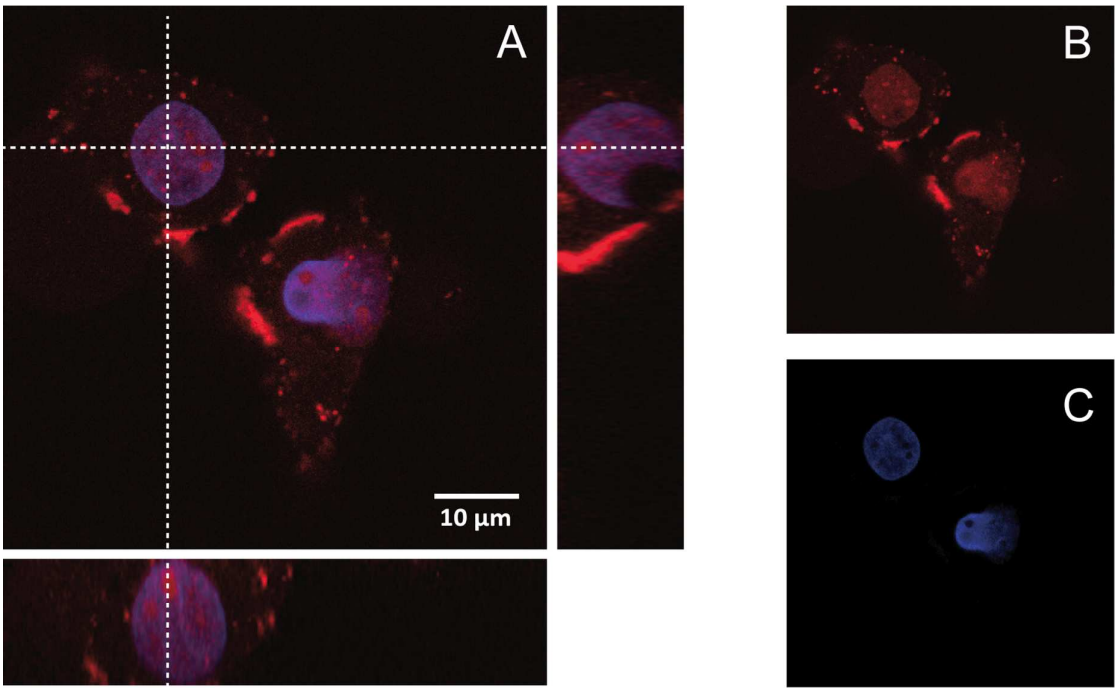
SUPPLEMENTARY FIGURES



Supplementary Figure 1. Cryo-SEM image of transfection competent TMC-SA/SSO polyplexes at N/P ratio 80. White arrows indicate polyplexes. A mostly regular spherical morphology can be observed.



Supplementary Figure 2. Live cell imaging by confocal laser scanning microscopy. TMC-SA/Cy5-SSO complexes (represented in red) at N/P 80 and 70 kDa Rhodamine-Dextran (represented in green) were co-incubated with HeLa/Luc705 cells for 4 h. After extensive washing with PBS, OPTI-MEM (no phenol red) was added to the wells and cells were imaged. HOECHST (represented in blue) was used for counterstaining the nuclei. Top image represents an orthogonal view with dashed lines indicating the xy, xz, yz planes of view. Arrows point to examples of co-localization of dextran and Cy5-SSO (identified by appearance of yellow color). Arrowheads point to regions of accumulation of TMC-SA/Cy5-SSO complexes at the cell membrane. The lower image represents a maximum intensity z-projection of 15 slices giving an overview of the vesicle spread throughout the cell and the aggregation of Cy5-SSO polyplexes at the periphery of the cell. Co-localization spots, in yellow, are present in high amounts as observed in the z-projection and confirmed through the orthogonal view analysis.



Supplementary Figure 3. View of Figure 1 focused on the nuclear (Hoechst staining, Blue) and Cy5-SSO (Red) fluorescence co-localization. A) Orthogonal views of the merged fluorescence channels. B) TMC-SA/Cy5-SSO fluorescence channel image. C) Hoechst fluorescence channel image