

Supplementary Information

Figure S1a: Confocal laser fluorescence microscopy images of ES2 cells stained with calcein AM (green channel) after incubation with containers (red channel) loaded with Rh6G (left) and TD4 (right) at two different concentrations (high and low) at different culturing times (2, 8, 24, and 48 h) (scale bar 50 μ m).



2 h 8 h 24 h Figure S1b: Control samples without containers (scale bars 50 μm).



Rh6G TD4 Figure S2a: Confocal laser fluorescence microscopy images of MRC5 cells stained with calcein AM (green channel) after incubation with containers (red channel) loaded with Rh6G (left) and TD4 (right) at two different concentrations (high and low) at different culturing times (2, 8, 24, and 48 h) (scale bars 50 µm).



8 h 2 h 24 h **Figure S2b:** Control images without containers (scale bars 50 µm).

48 h



Figure S3: Histograms of flow cytometry analysis of MRC5 cells after 24h (a,c) and 48 h (b,d) of uptake. In (a,b) cells had been incubated in Rh6G-loaded containers medium, the black curves correspond to high container concentration, the red curve to low container concentration, and the blue curve to a control experiment without containers. Figures (c,d) show the same experiment for TD4-loaded containers.



Figure S4: MRC5 (a) and ES2 (b) cells 8 h after uptake of Rh6G loaded containers. Lysosomes are visualized in blue via LysoTracker staining. The green channel shows the calcein labeled cells and the red one the Rh6G fluorescence. Only a weak co-localization is manifested by the white dots. Scale bars correspond to $10\mu m$.