

SUPPORTING INFORMATIONS

for

mRNA delivery using non-viral PCL nanoparticles

Ilaria E. Palamà,^{a*} Barbara Cortese,^a Stefania D'Amone,^a and Giuseppe Gigli^{a,b,c}

^aNational Nanotechnology Laboratory, Institute Nanoscience CNR (NNL, CNR-NANO) via Arnesano, Lecce, Italy;

^bDept. Matematica e Fisica 'Ennio De Giorgi', University of Salento, via Monteroni, Lecce, Italy;

^cItalian Institute of Technology (IIT) - Center for Biomolecular Nanotechnologies, via Barsanti, Arnesano, Italy

*Corresponding author contacts - Mail: ilariaelena.palama@nano.cnr.it, Phone: +39 0832 298371

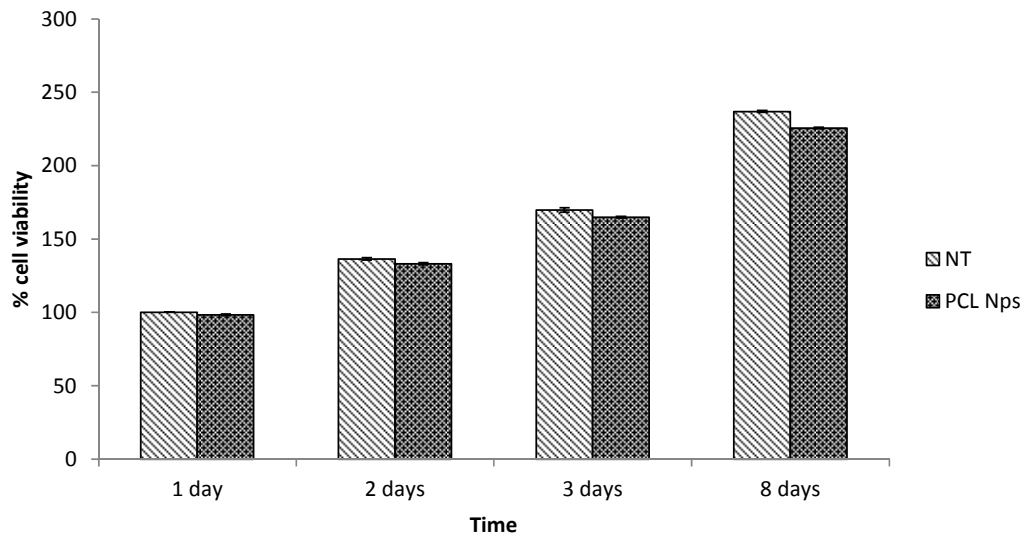
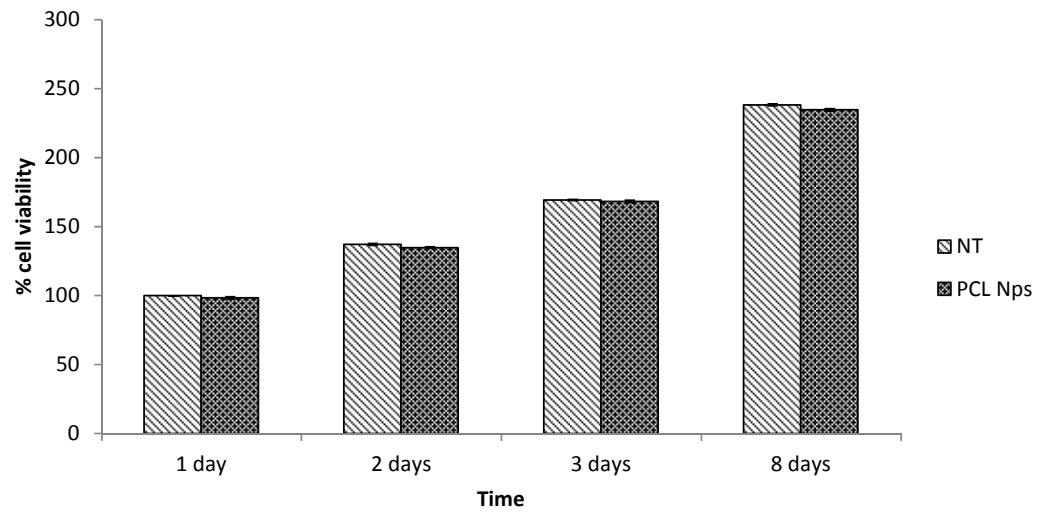
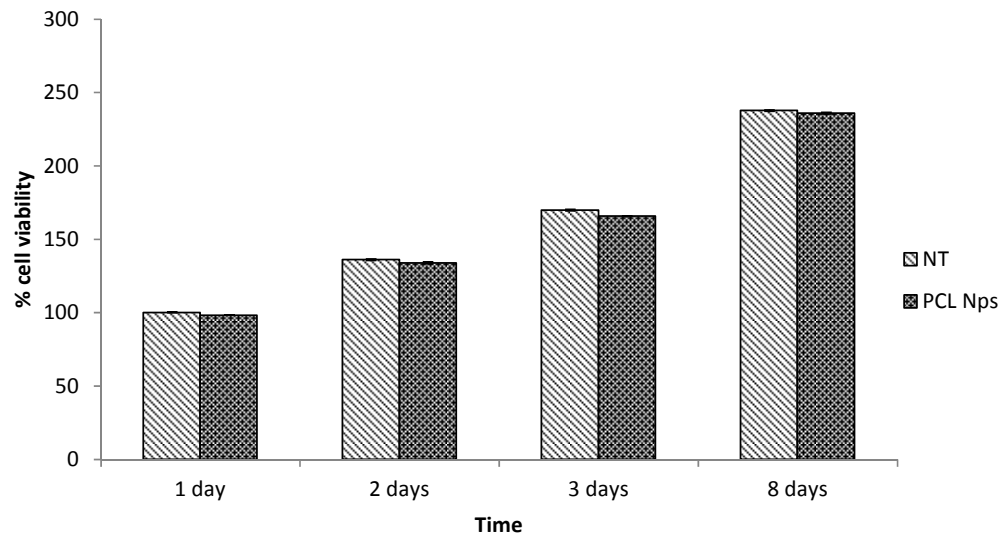
A**B****C**

Figure S1. MTT cytotoxicity test (from 1 to 8 days) for NIH 3T3 fibroblasts (A), HeLa cells (B) and MG63 osteoblasts (C) interacting with culture medium (i.e., not treated, NT) and PCL NPs. Representative measurements of three distinct sets of data have been reported (*t-Student test*, $P < 0.05$)

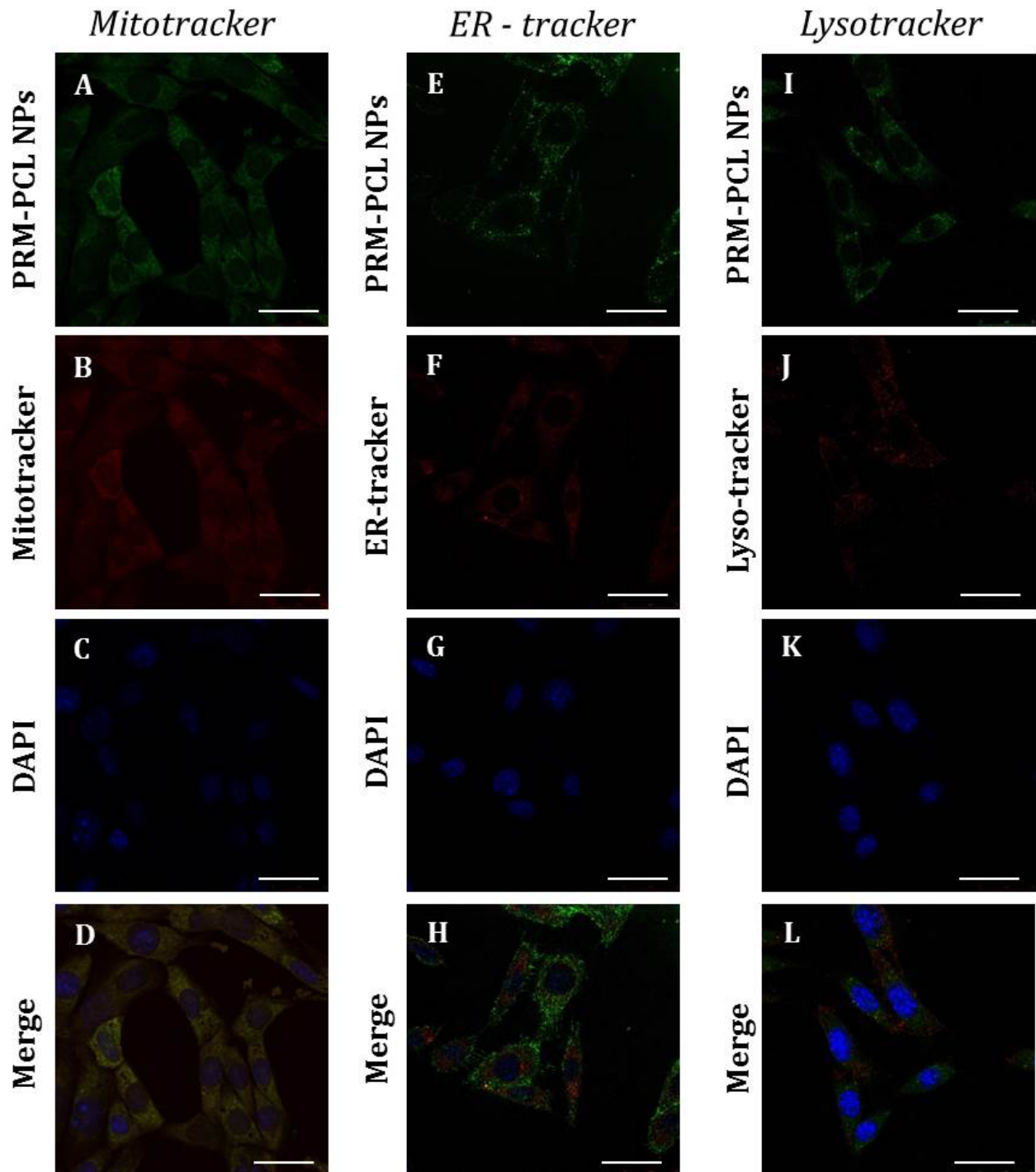


Figure S2. Intracellular accumulation of PRM-FITC loaded PCL NPs in NIH 3T3 fibroblasts (A,E,I, green). CLSM images of cell staining with Mitotracker (B, mitochondria marker, red), ER-tracker (F, endoplasmic reticulum marker, red) and Lyso-tracker (J, lysosome marker, red). Co-localization of PRM-FITC loaded NPs (A,E,I) with Mitotracker (B), ER-tracker (F) and Lyso-tracker (J) after 3 hours treatment with the nanoparticles are shown in merge CLSM images D,H,L, respectively. Cell nuclei were counterstained with DAPI (blue) as shown in the CLSM images C,G,K. Scale bars: 25 μm .

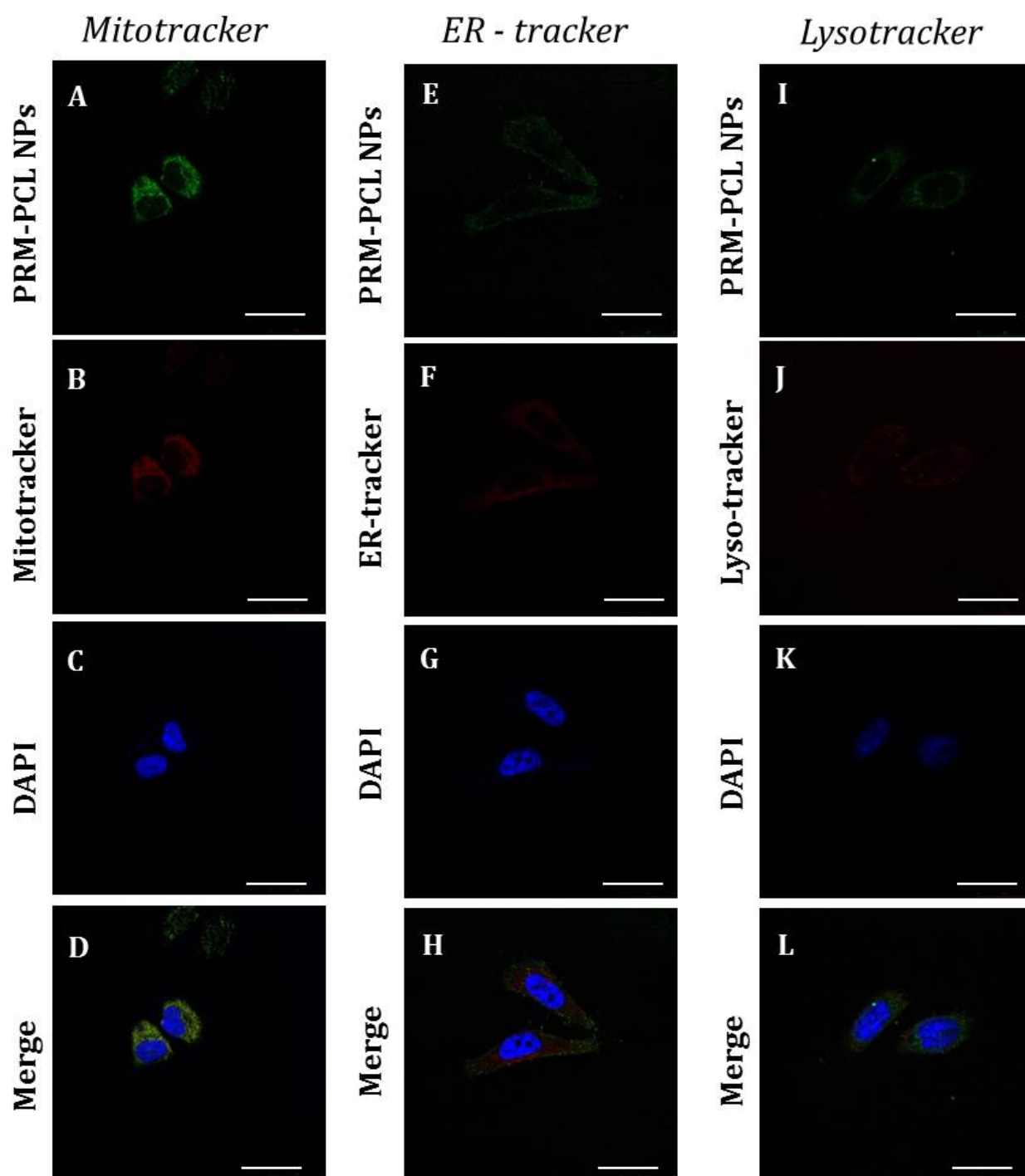


Figure S3. Sub-cellular localization of PRM-FITC loaded PCL NPs in HeLa (A,E,I, green). CLSM images of cell staining with Mitotracker (B, mitochondria marker, red), ER-tracker (F, endoplasmic reticulum marker, red) and Lyso-tracker (J, lysosome marker, red). In D,H,L images are shown colocalization of PRM-FITC loaded NPs (A,E,I) with Mitotracker (B), ER-tracker (F) and Lyso-tracker (J) after 3 hours treatment with the nanoparticles, respectively. Cell nuclei were counterstained with DAPI (blue) as shown in the CLSM images C,G,K. Scale bars: 25 μ m.

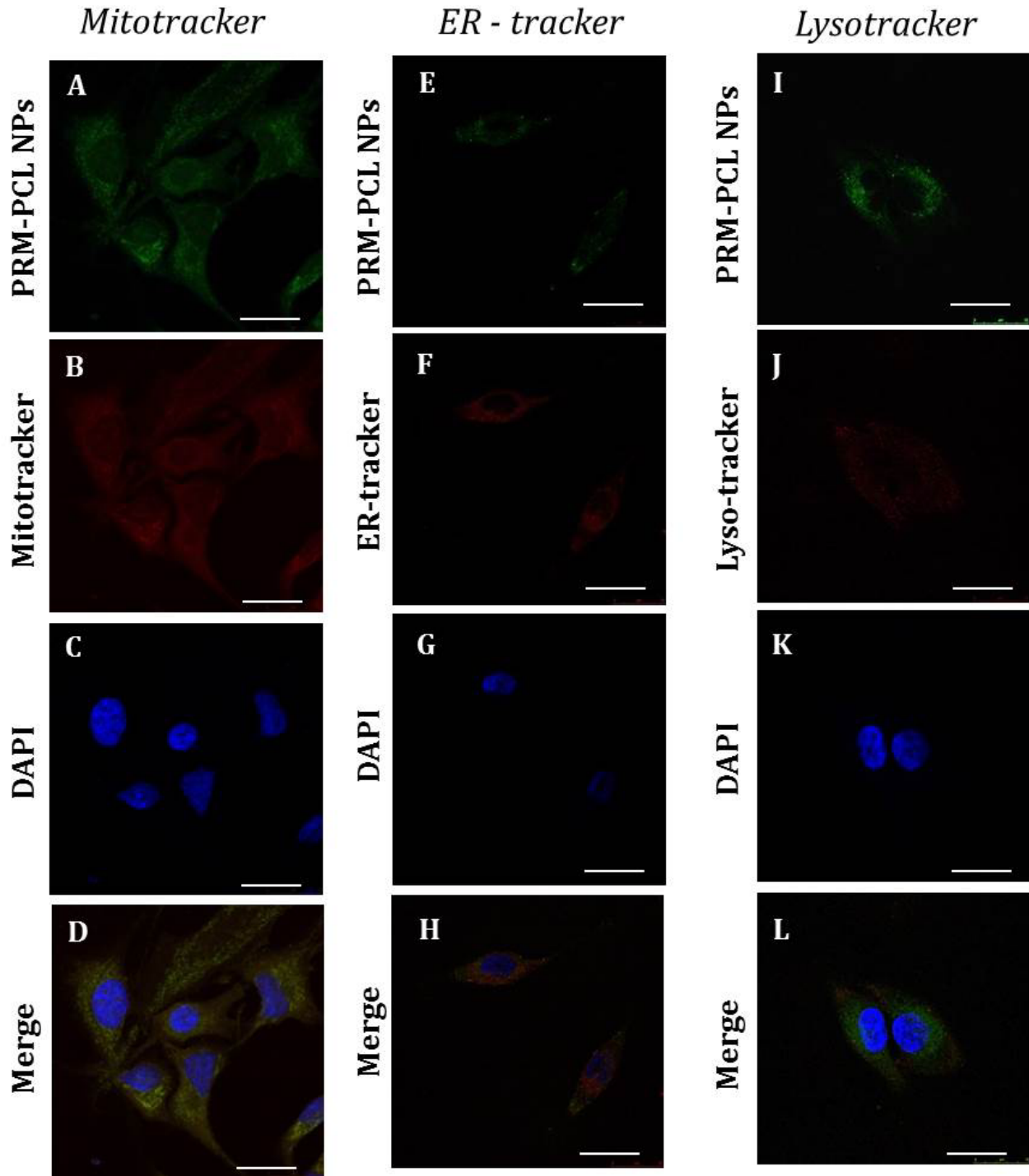


Figure S4. Intracellular localization of PRM-FITC loaded PCL NPs in MG63 osteoblasts (A,E,I, green). CLSM images of cell staining with Mitotracker (B, mitochondria marker, red), ER-tracker (F, endoplasmic reticulum marker, red) and Lyso-tracker (J, lysosome marker, red). In D,H,L images are shown co-localization of PRM-FITC loaded NPs (A,E,I) with Mitotracker (B), ER-tracker (F) and Lyso-tracker (J) after 3 hours treatment with the nanoparticles, respectively. Cell nuclei were counterstained with DAPI (blue) as shown in the CLSM images C,G,K. *Scale bars: 25 μ m.*