

Electronic Supporting Information (ESI)

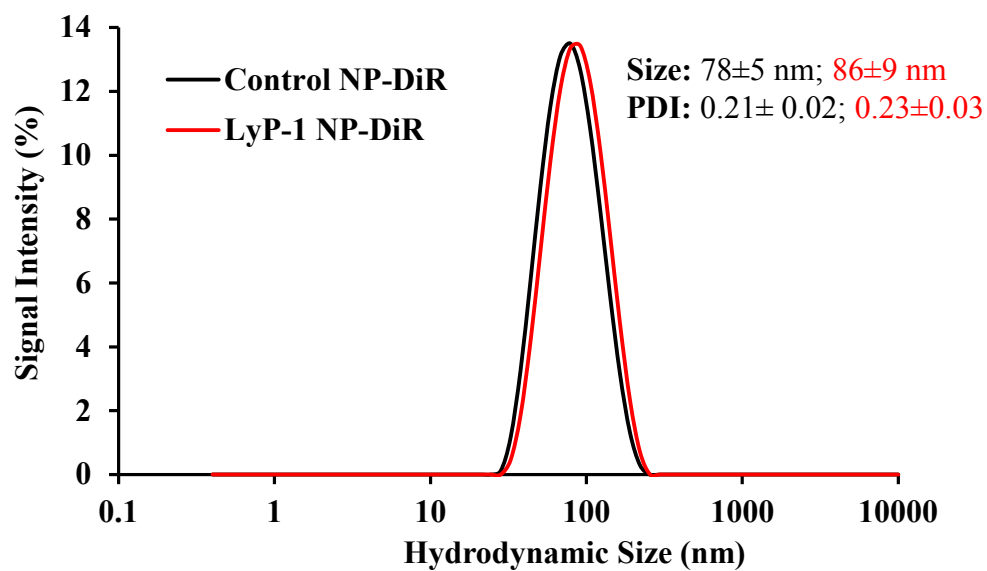
Synthesis and characterization of tumor-seeking LyP-1 peptide integrated lipid-polymer composite nanoparticle

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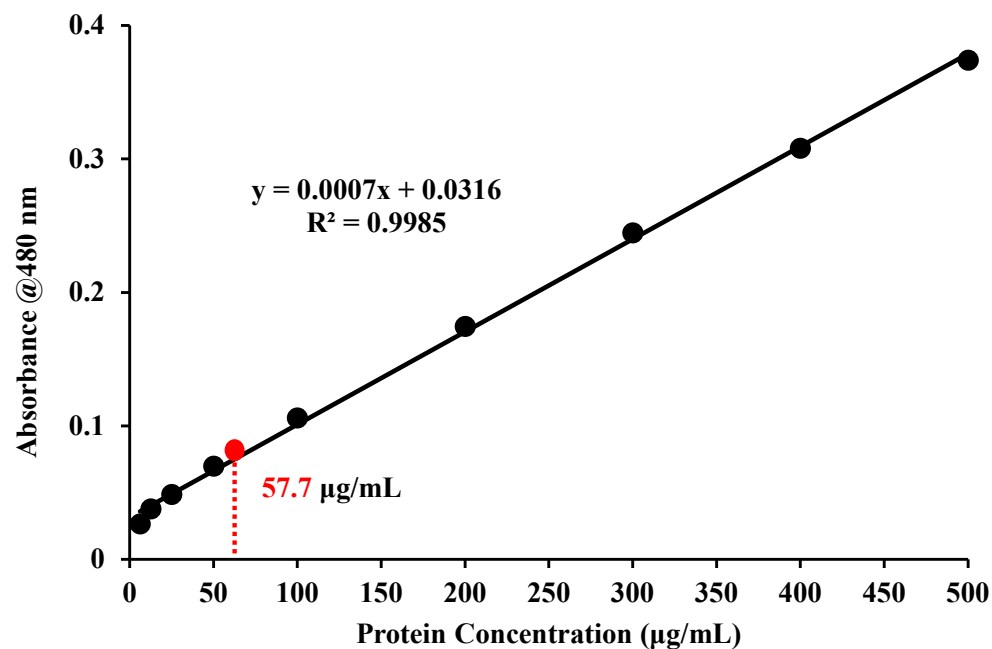
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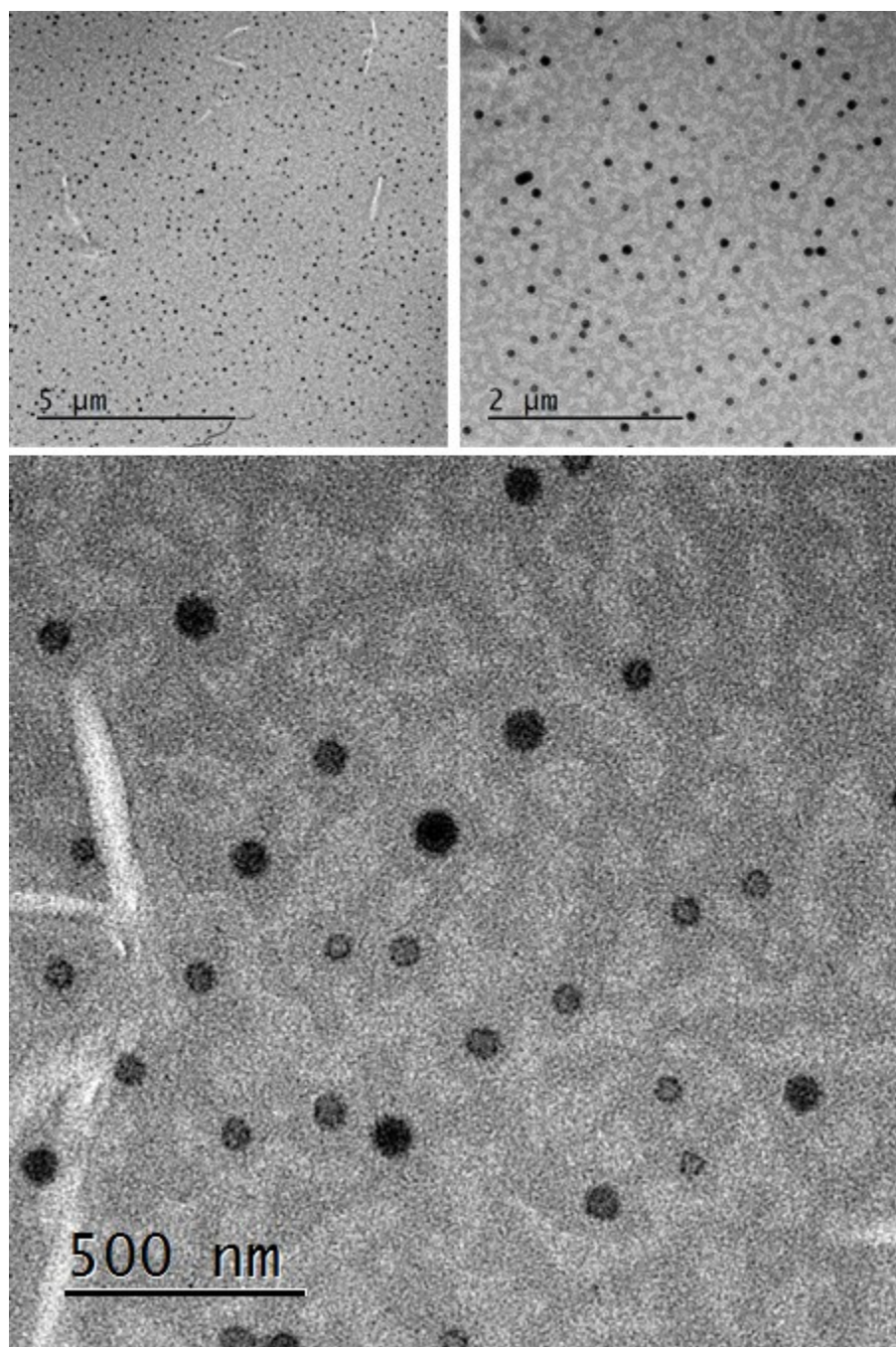
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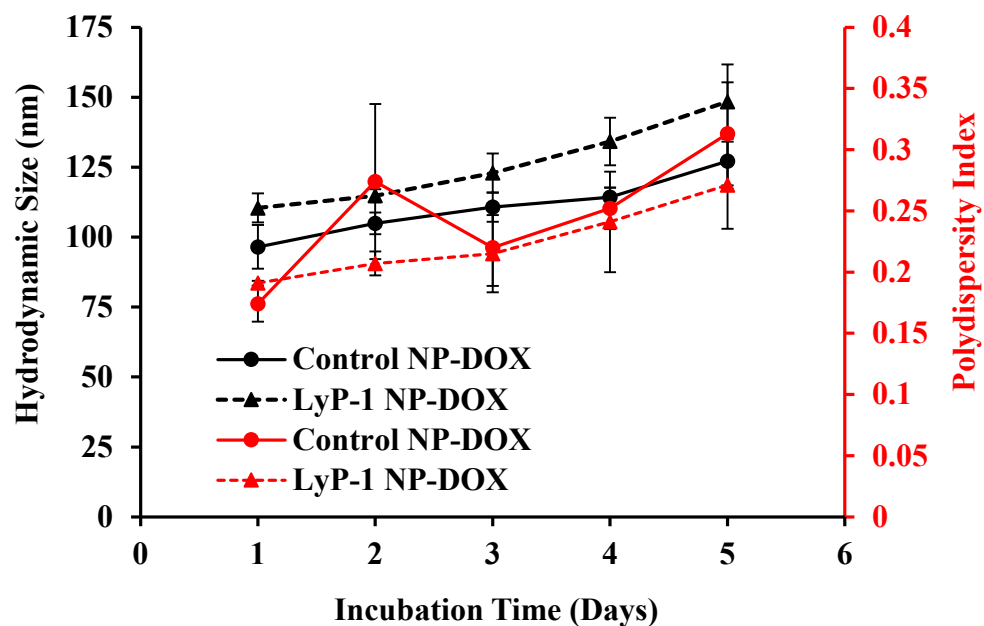
ESI 1: Dynamic light scattering showing the average hydrodynamic size of Control NP-DiR and LyP-1 NP-DiR.



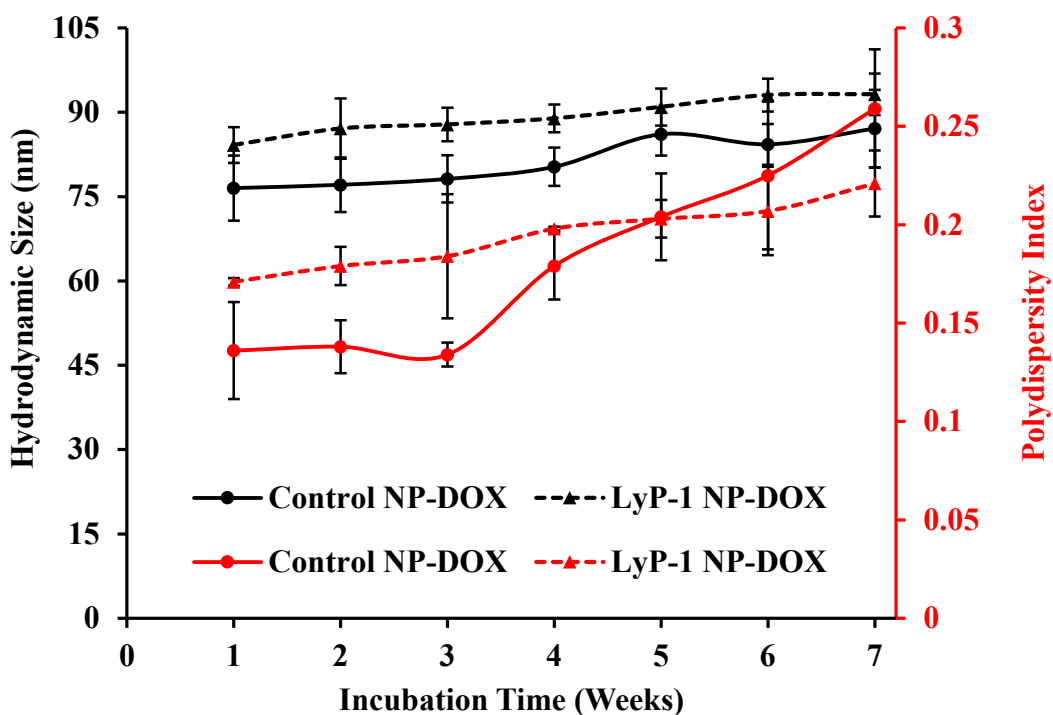
ESI 2: Calibration curve for quantification of LyP-1 in NP using colorimetric Rapid Gold BCA Assay, Thermo Fisher Scientific Cat No: A53225



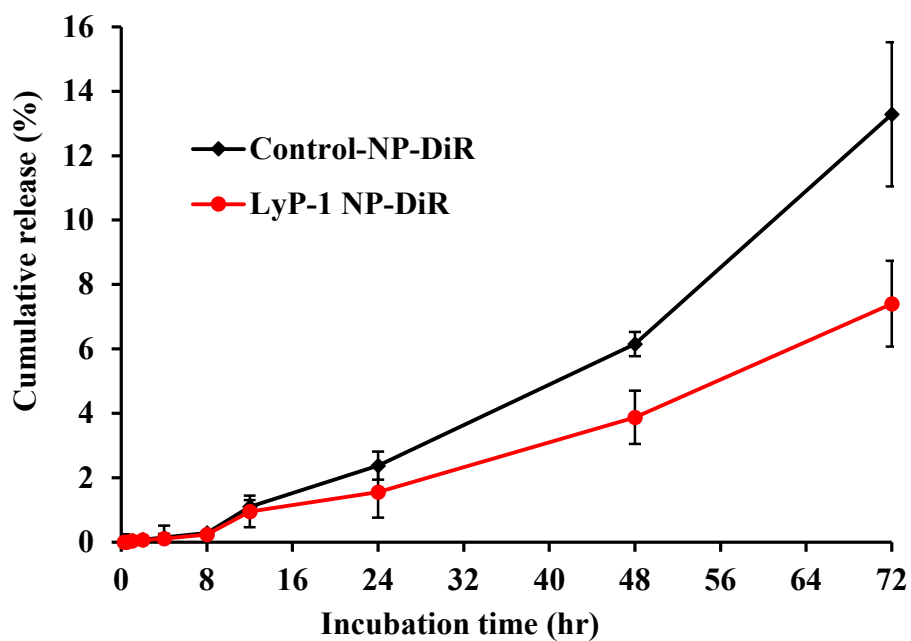
ESI 3. Representative transmission electron microscopy images of LyP-1 NPs with different magnifications.



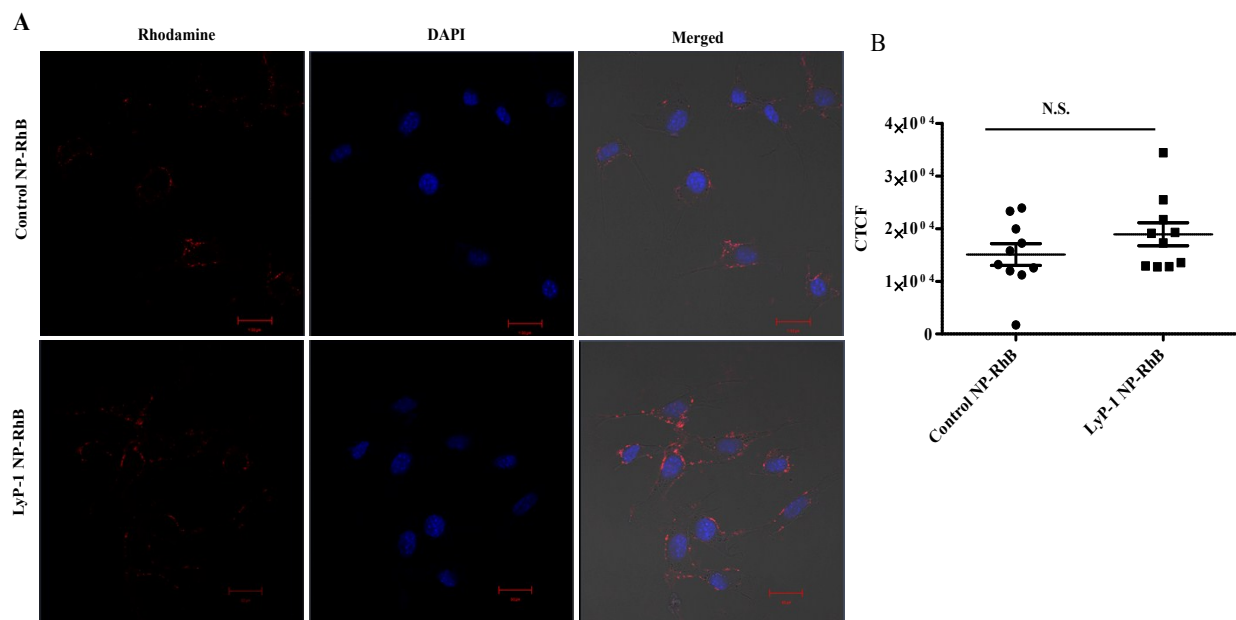
ESI 4: Stability study of control NP-DOX and LyP-1 NP-DOX in PBS (pH = 7.4) at 37°C using a dynamic light scattering experiment (n=3).



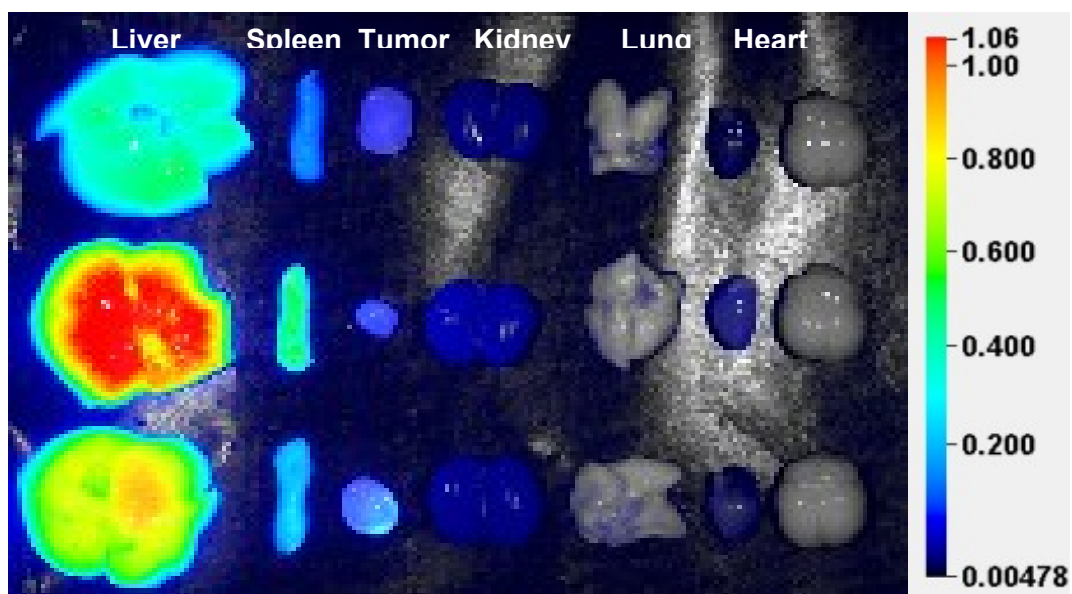
ESI 5: Stability study of control NP-Dox and LyP-1 NP-Dox in PBS (pH = 7.4) using dynamic light scattering experiment at 4°C (n=3).



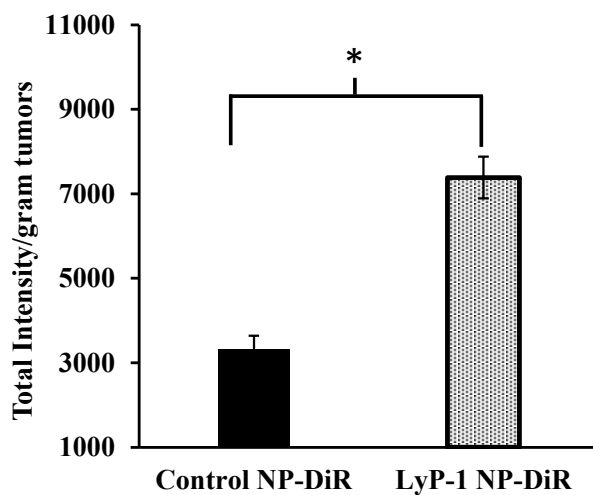
ESI 6: Comparative DiR dye release characteristics of Control-NP-DiR and LyP-1 NP-DiR NPs in PBS (pH = 7.4) after 72 h incubation. Data represent mean $\pm$ SD, n = 3.



ESI 7: Cellular internalization study in mouse Fibroblast (NIH/3T3) cells. A) Comparative confocal images of NIH/3T3 cells incubated with RhB-labelled NPs (50 $\mu\text{g/mL}$) for 3 h at 37°C. The nuclei of the cell were stained by DAPI (blue). B) Corresponding quantification of internalized NPs following corrected total cell fluorescence (CTCF) using ImageJ. The cells were imaged under 20x lens and 20 μm scale bar. Unpaired t-test, p-value 0.2193, p-value summary-nonsignificant (n.s).



ESI 8. Comparative biodistribution of LyP-1 NP in various organs after 48 hr post-injection imaged for DiR dye in Li-COR® whole-body imaging system.



ESI 9: Quantification of tumor accumulation of Control NP-DiR and LyP-1 NP-DiR after 48 hr post-injection. P value=0.0169,* student F-test). Data represent mean ± SD, n = 3.