

Supplementary material

Immobilization of Wnt Fragment Peptides on Magnetic Nanoparticles or Synthetic Surfaces Regulate Wnt Signaling Kinetics

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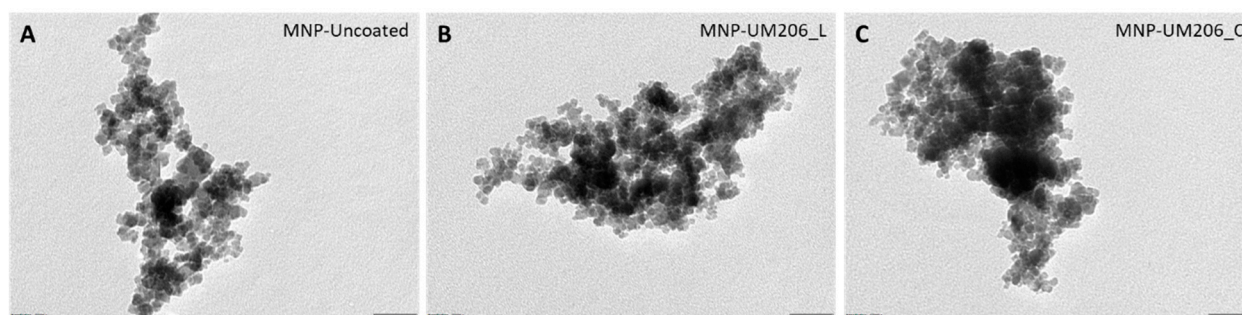
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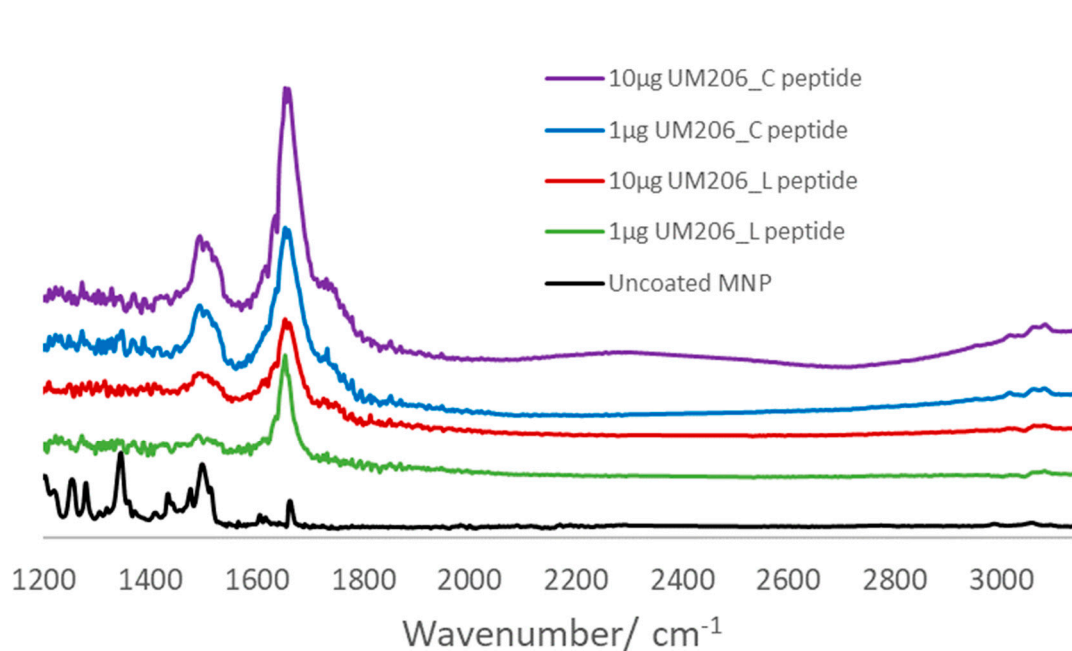
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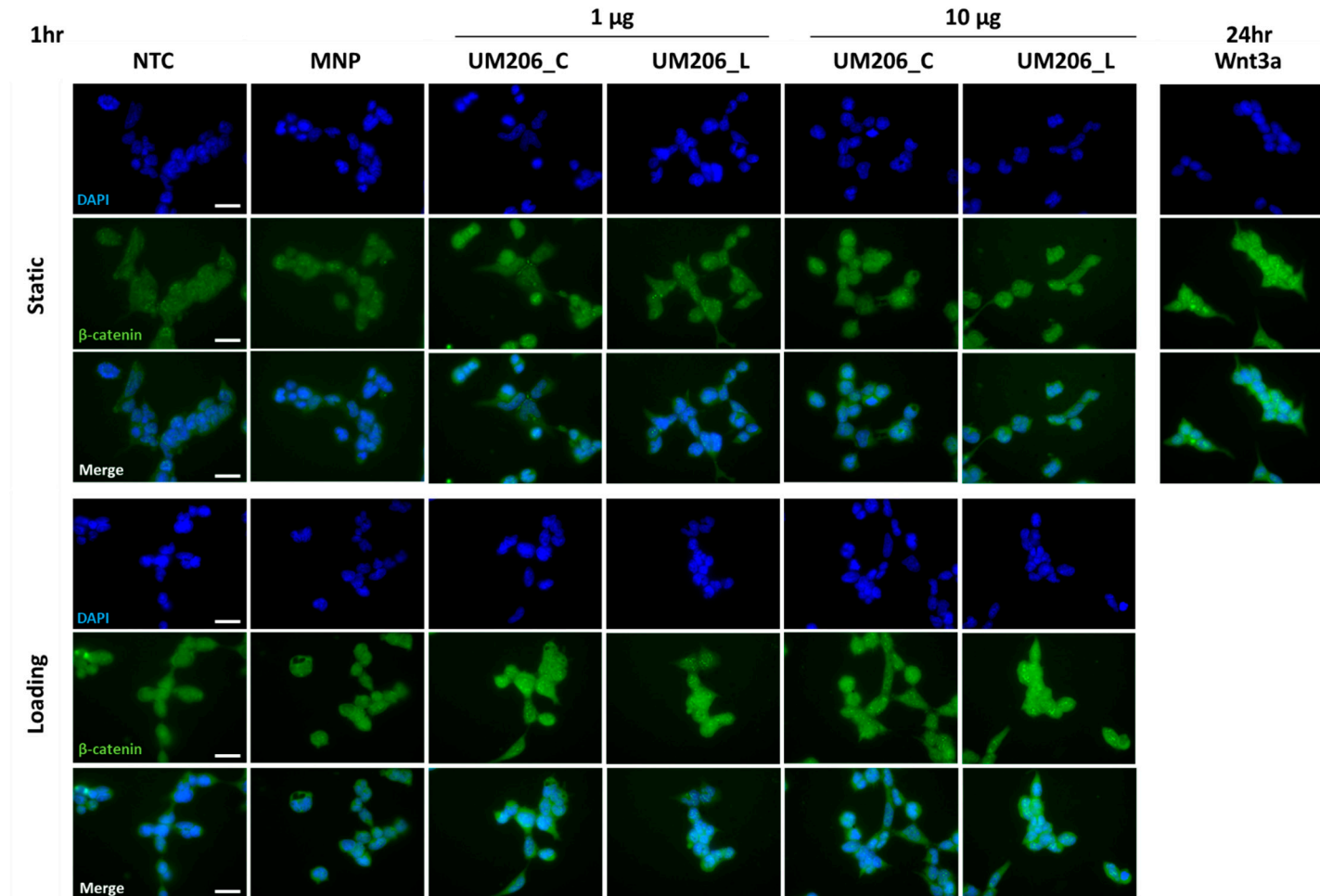


Supplementary Figure S1: Transmission electron micrographs of Blank-MNP (MNP-Uncoated) (a), 10 μ g-Linear-UM206 coated MNP (MNP-UM206_L) (b) and 10 μ g-Cyclic-UM206 coated MNP (MNP-UM206_C) (c), magnification is 270k, bar represents 50 nm.

MNP FT-IR spectra



Supplementary Figure S2: FT-IR spectra of Control MNP (Uncoated MNP) (**Black**), 1μg-Linear-UM206 coated MNP (1μg UM206_L peptide) (**Green**), 10μg-Linear-UM206 coated MNP (10μg UM206_L peptide) (**Red**), 1μg-Cyclic-UM206 coated MNP (1μg UM206_C peptide) (**Blue**) and 10μg-Cyclic-UM206 coated MNP (10μg UM206_C peptide) (**Purple**). Absorbance peaks at ~1660cm⁻¹, corresponding to amide I C=O stretch, ~1500cm⁻¹ corresponding to amide II N-H bending and a minor peak around ~3000cm⁻¹, corresponding to C-H stretch were all present, especially in the coated MNP groups. Spectra represent an average of 256 scans at a resolution of 4 cm⁻¹.



Supplementary Figure S3: Immunofluorescent images of active β -catenin in response to UM206 functionalised MNP after 1h treatment. A base level of active β -catenin was observed in the non-treated control (NTC) and uncoated MNP (MNP) with or without loading with MFB. A mild increase in active β -catenin was observed in response to static UM206_C and UM206_L with either 1 μ g or 10 μ g coating (top row). In contrast a clear increase in active β -catenin which was also mobilised to the nucleus was observed in response to the positive control Wnt3a after 24h. A similarly increased level of nuclear mobilised active β -catenin was also observed in cells treated with UM206_C and UM206_L with either 1 μ g or 10 μ g coating when loaded for 1h with MFB (bottom row). Representative images of n=3 shown. Scale bar represents 50 μ m.