

Supplementary Materials: Targeting Nanomaterials to Head and Neck Cancer Cells using A Fragment of the Shiga Toxin as A Potent Natural Ligand

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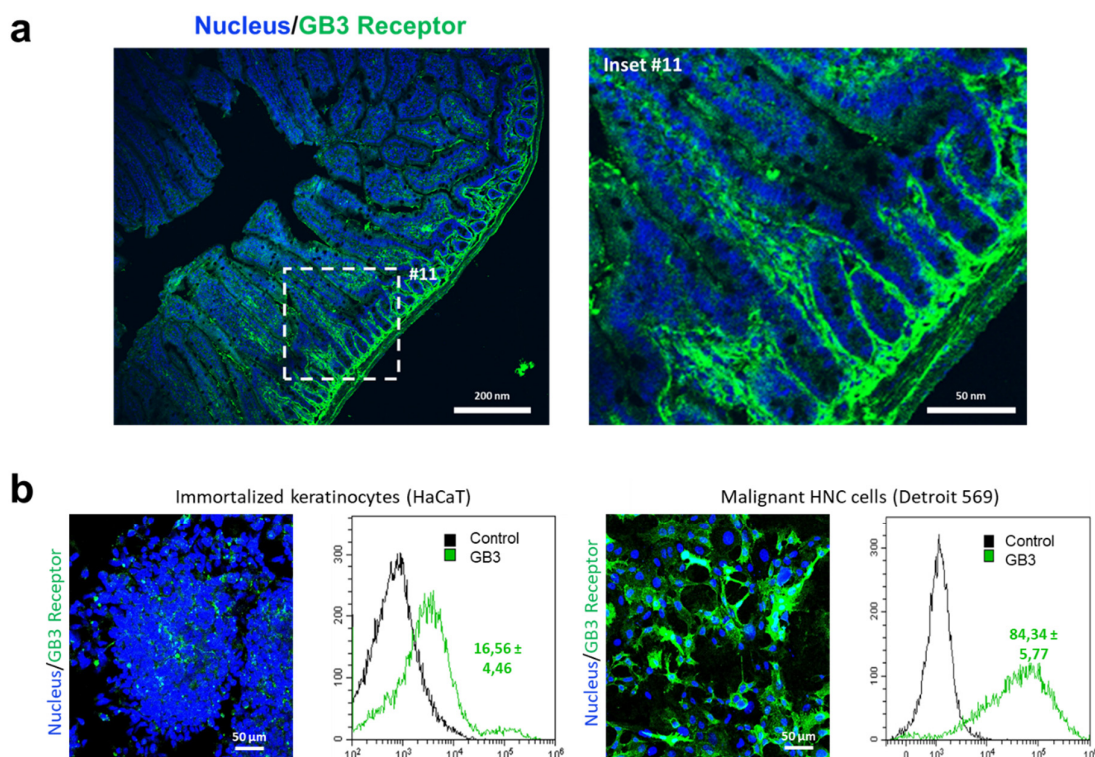


Figure S1. (a) Confocal microscopy image of a mouse intestine cryosection immunostained for the GB3 membrane receptor (green channel). Nuclei are stained with Hoechst (blue channel). Confocal images are pseudo-colored. (b) Human precancerous (Immortalized keratinocytes, HaCaT) and HNC cells (Detroit 569) immunostained for the GB3 receptor (green channel). The morphology of the HNC cells in culture shows a mesenchymal shape. Graphs on the right show the quantification of GB3 expression in a total of 10.000 cells by flow cytometry. GB3 positive cells represent ca. 16% in HaCat keratinocytes compared to ca. 84% in HNC Detroit 569 cells.

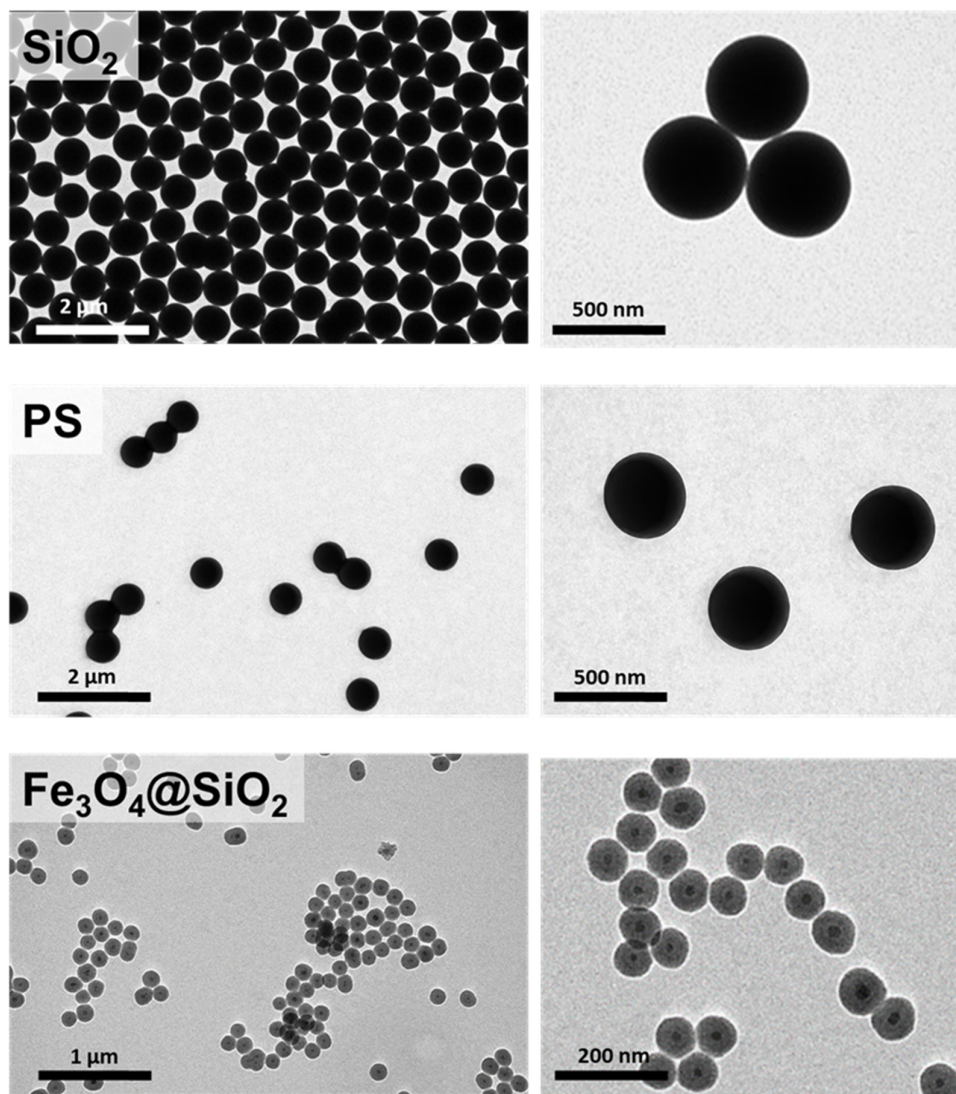


Figure S2. Transmission Electron Microscopy images of the nanoparticles used in the study. See Methods section of nanoparticle characterization.

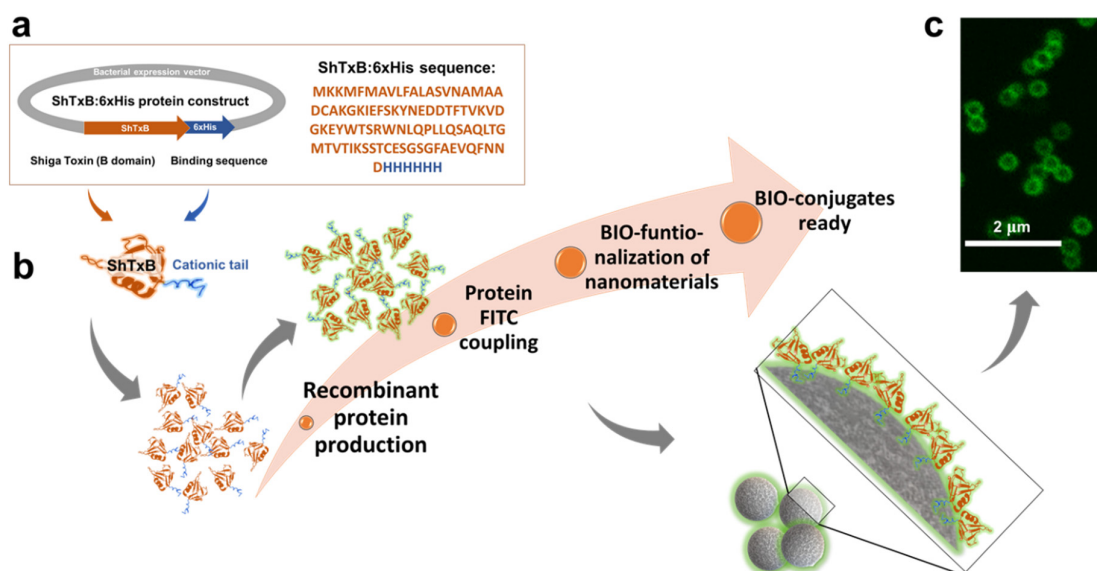


Figure S3. Ligand-protein production and nanomaterial functionalization procedure.

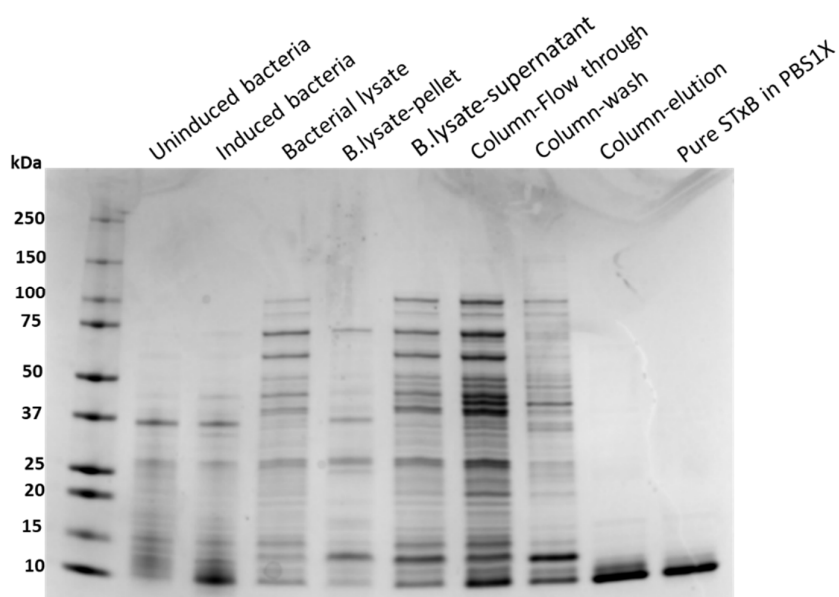


Figure S4. Coomassie-blue stained SDS-PAGE electrophoresis gel showing the different fractions of proteins obtained during the overexpression and purification steps of the StxB:6xHis protein (ShTxB).

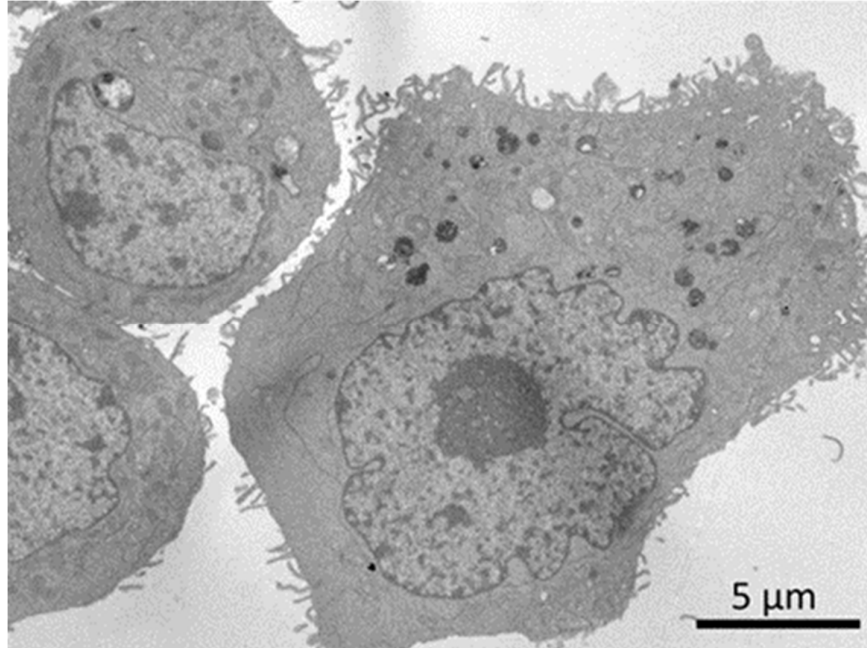


Figure S5. Transmission Electron Microscopy image of an ultrathin section of a control human HNC cell.