Supplementary Information

GLUT1 and GLUT3 involvement in anthocyanin gastric transport - Nanobased targeted approach.

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Figures

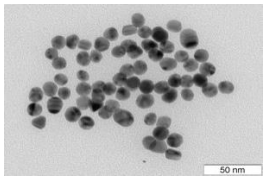
	TEM (nm)	SPR Peak	DLS size(nm)
AuNPs	14 ± 1 	520	19
AuNP@PEG		521	21.5
AuNP@PEG@anti-*GLUT1*		524	31
AuNP@PEG@anti-*GLUT3*		524	31

Figure S1 – Characterization of gold nanoconjugates. Gold nanoparticles (AuNPs), AuNPs functionalized with 30 % PEG (AuNP@PEG) and AuNP@PEG functionalized with anti-GLUT1 (AuNP@PEG@anti-GLUT1) or anti-GLUT3 (AuNP@PEG@anti-GLUT3) through Transmission Electron Microscopy (TEM), Dynamic Light Scattering (DLS) and UV-Vis (Surface Plasmon Resonance, SPR peak).

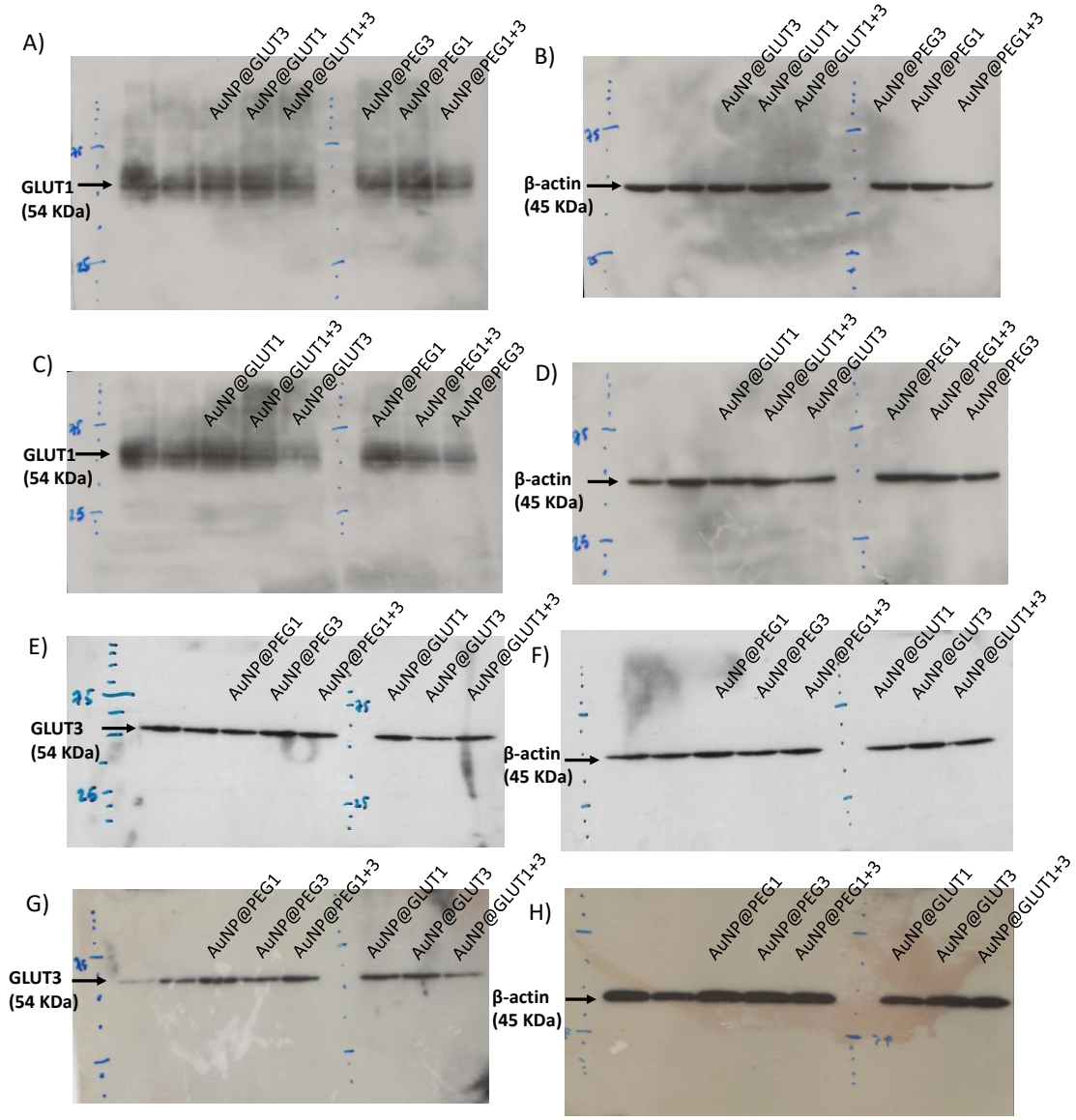


Figure S2 – Full length blots of the Western Blot analysis of A) GLUT1 after 24 h; B) β-actin, control of GLUT1 blot after 24 h; C) GLUT1 after 24h+24h and D) β-actin, control of GLUT1 blot after 24h+24h. E) GLUT3 after 24 h; B) β-actin, control of GLUT3 blot after 24 h; C) GLUT3 after 24h+24h and D) β-actin, control of GLUT3 blot after 24h+24h. Represented Western Blots correspond to 10 µg total protein of MKN-28 cells incubated for 24 h or 24 h plus 24 h with fresh RPMI medium supplemented with 5.5 mM fructose and 30 nM AuNP@PEG@anti-*GLUT1* (AuNP@GLUT1), 20 nM AuNP@PEG@anti-*GLUT3* (AuNP@GLUT3), or a mixture of 30 nM AuNP@PEG@anti-*GLUT1* and 20 nM AuNP@PEG@anti-*GLUT3* (AuNP@GLUT1+3). After 24 h cells were collected or incubated for an additional 24 h with fresh medium supplemented according to the first incubation. Control samples consist in MKN-28 cells treated with RPMI medium supplemented with 5.5 mM

fructose and 0.75 nM AuNP@PEG (control of AuNP@GLUT1), 0.63 nM AuNP@PEG (control of AuNP@GLUT3), or 1.38 nM AuNP@PEG (control of AuNP@GLUT1+3), and collected at the same time point.

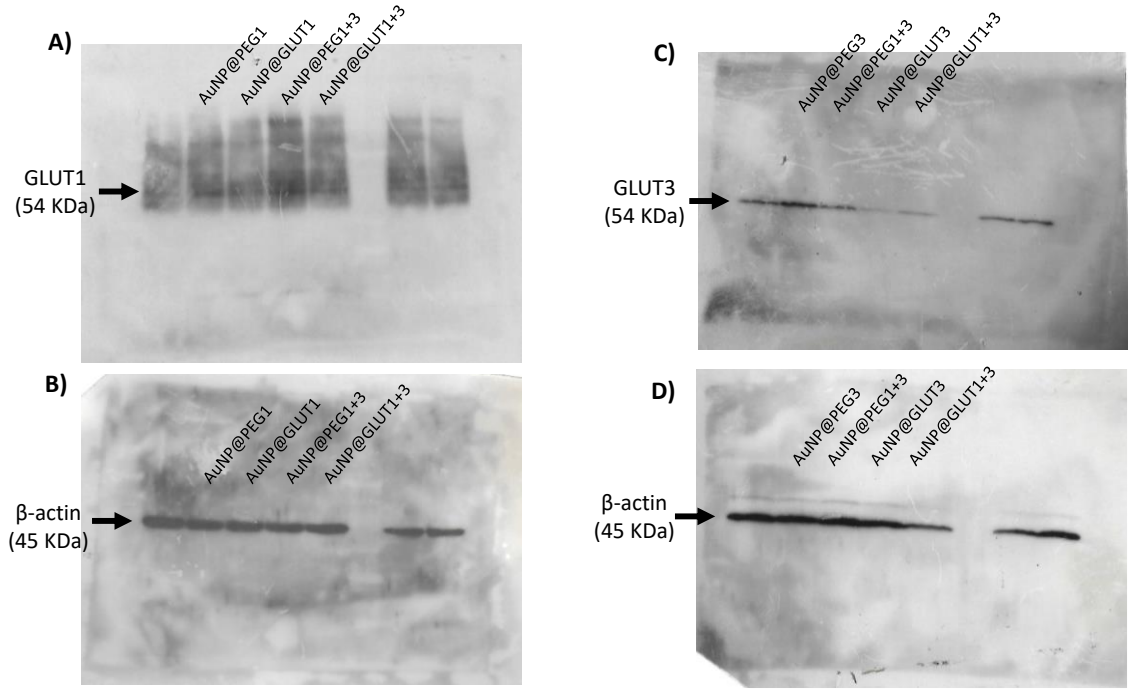


Figure S3 – Full length blots of the Western Blot analysis of A) GLUT1; B) β-actin, control of GLUT1 blot; C) GLUT3 and D) β-actin, control of GLUT3 blot. Represented Western Blots correspond to 10 µg total protein of MKN-28 cells grown on transwell plates and incubated for 24 h with fresh RPMI medium supplemented with 5.5 mM fructose and 0.75 nM AuNP@PEG (AuNP@PEG1), 0.63 nM AuNP@PEG (AuNP@PEG3), 1.38 nM AuNP@PEG (AuNP@PEG1+3), 30 nM AuNP@PEG@anti-GLUT1 (AuNP@GLUT1), 20 nM AuNP@PEG@anti-GLUT3 (AuNP@GLUT3), or a mixture of 30 nM AuNP@PEG@anti-GLUT1 and 20 nM AuNP@PEG@anti-GLUT3 (AuNP@GLUT1+3). After 24 h cells incubated for an additional 24 h with fresh medium supplemented according to the first incubation.