

10 20 30 40 50 60
MMKTL~~LL~~LVG LLLTWESGQV LGDQTVSDNE LQEMSNQGSK YVNKEIQNAV NGVKQIKTLI

70 80 90 100 110 120
EKTNEERKTL LSNLEEAKKK KEDALN~~ET~~RE SETK~~LK~~ELPG VCN~~ET~~MMALW EECKPCLKQT

130 140 150 160 170 180
CMK~~F~~YARVCR SG~~S~~GLVGRQL EE~~F~~LN~~Q~~SSPF YFWMNGDRID S~~L~~LE~~N~~DRQQT HMLDVMQDHF

190 200 210 220 230 240
SRASSIIDEL FQDRFF~~T~~REP QDTYHYLPFS LPHRRPHFFF PKSRI~~V~~RSLM PFSPYEPLNF

250 260 270 280 290 300
HAMFQPFLEM IHEAQQAMDI HFHSPAFQHP PTEFIREGDD DRTVCREIRH N~~S~~TGCLRMKD

310 320 330 340 350 360
QCDKCREILS VDCSTN~~N~~PSQ AKLRRELD~~E~~S LQVAERL~~T~~RK YNELLKSYQW KMLN~~T~~SSLLE

370 380 390 400 410 420
QLNEQFNWVS RLAN~~L~~TQGED QYYLRVTTVA SHTSDSDVPS GVTEVVVKLF DSDPITVTVP

430 440
VEVSRKNPKF METVAEKALQ EYRKKHREE

Figure S-1. The primary structure of human secretory clusterin (sCLU) and the sites of clusterin glycosylation. sCLU is synthesized as a pre-proprotein consisting of 449 amino acids. During the posttranslational maturation the N-terminal signalling peptide composed of 22 amino acids (highlighted yellow) is cleaved off. The amino acid region 23-227 comprises the α -subunit of the mature protein, while the region 228-449 is known as β -subunit. The two subunits are connected to each other via disulphide bonds. Asparagine residues (N) of the protein (marked as pink) are heavily glycosylated. Data from UniProt Protein Database (Protein ID P10909).

- PNGase F PNGase F - PNGase F PNGase F

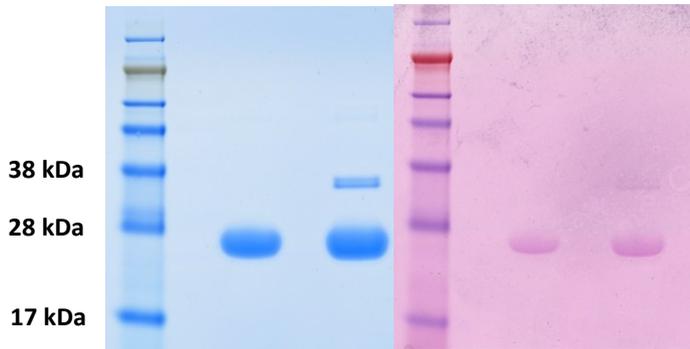


Figure S-2. PNGase F treatment of Apo AI. The PNGase F treatment of Apo AI did not cause a visible shift and the band remained at ca. 28 kDa. Glycoprotein staining kit additionally showed that the PNGase F treated Apo AI still contains sugar molecule (right gel). The band at ca. 35 kDa height corresponds to the enzyme PNGase F. 15 μ g protein was loaded onto the gel.

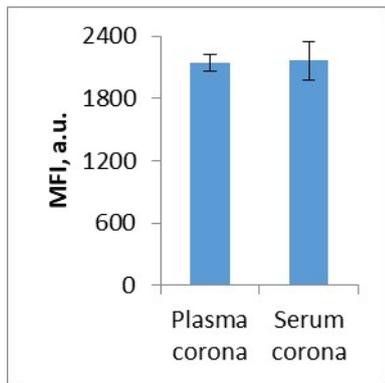


Figure S-3. Comparison of macrophage uptake for plasma-covered and serum-covered nanoparticles.

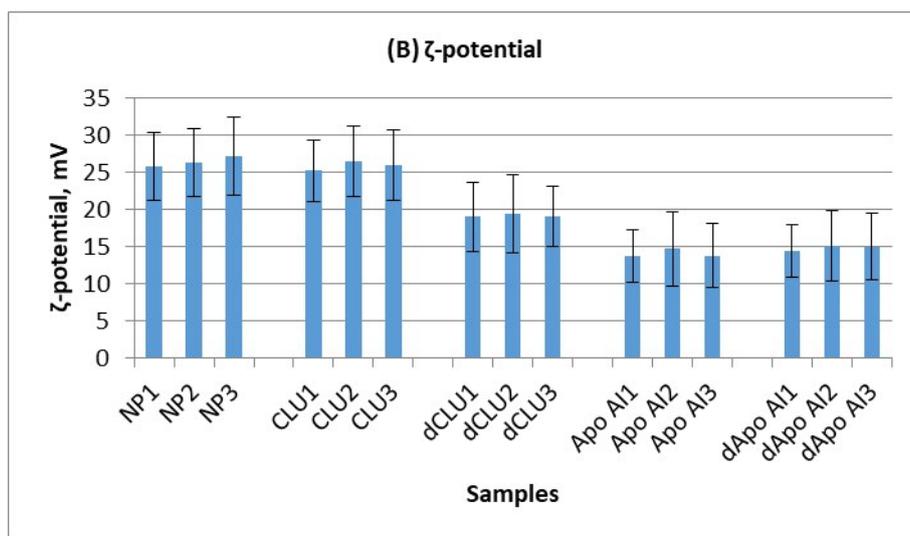
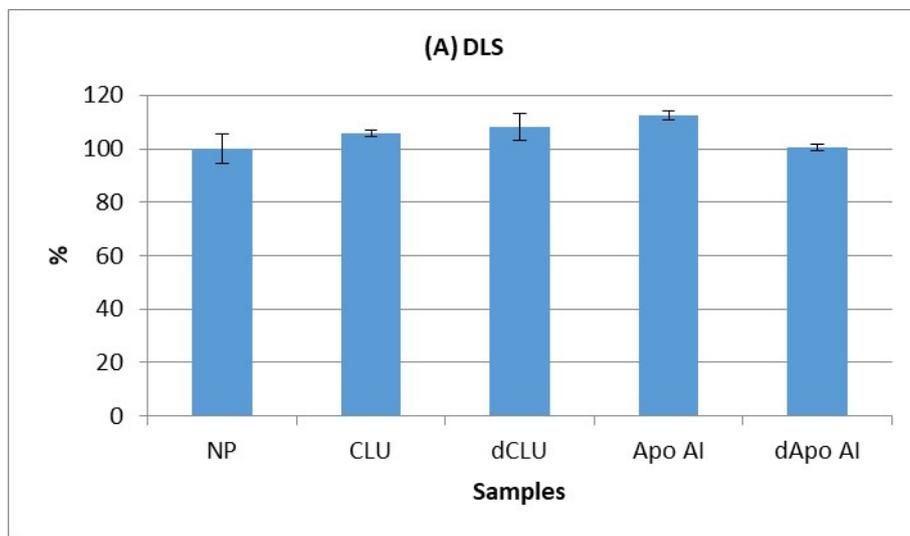


Figure S-4. (A) Dynamic Light Scattering (DLS) and (B) ζ -potential measurements of glycosylated and deglycosylated coronas of clusterin and Apo AI. For DLS measurements the data are normalized to pristine nanoparticles' size (set as 100%). The values are expressed as mean \pm Standard Deviation (n=3). For ζ -potential measurements triplicates were used, each of them representing an average of 12 measurements. NP - nanoparticle (KK132a); CLU - clusterin corona, Apo AI - apolipoprotein AI corona; dCLU - deglycosylated clusterin corona; dApo AI - deglycosylated apolipoprotein AI corona.

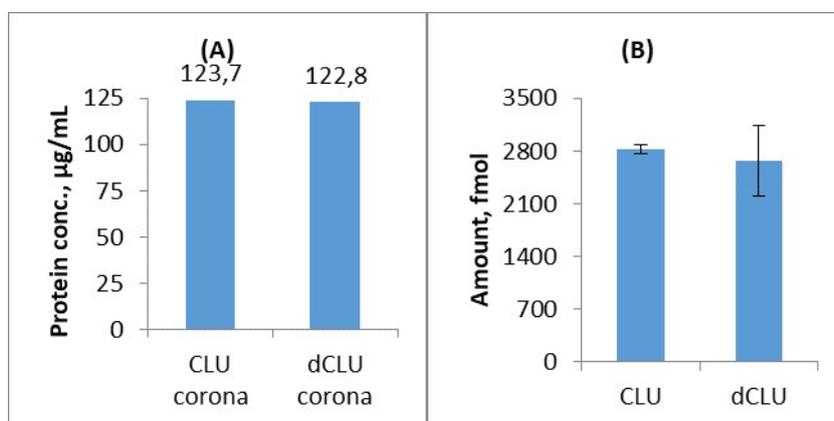


Figure S-5. (A) Total protein and (B) the amount of clusterin covering the surface of TW192 nanoparticles upon incubation with ordinary clusterin (CLU) or deglycosylated clusterin (dCLU). The data in the (A) chart shows the protein concentration of coronas (each 100 μL) measured by Pierce assay. The data in the (B) chart corresponds to the amount contained in 2 μL corona sample that was injected into the LC-MS.