Supplementary information

Effect of liposome surface modification with water-soluble phospholipid polymer chain-conjugated lipids on interaction with human plasma proteins

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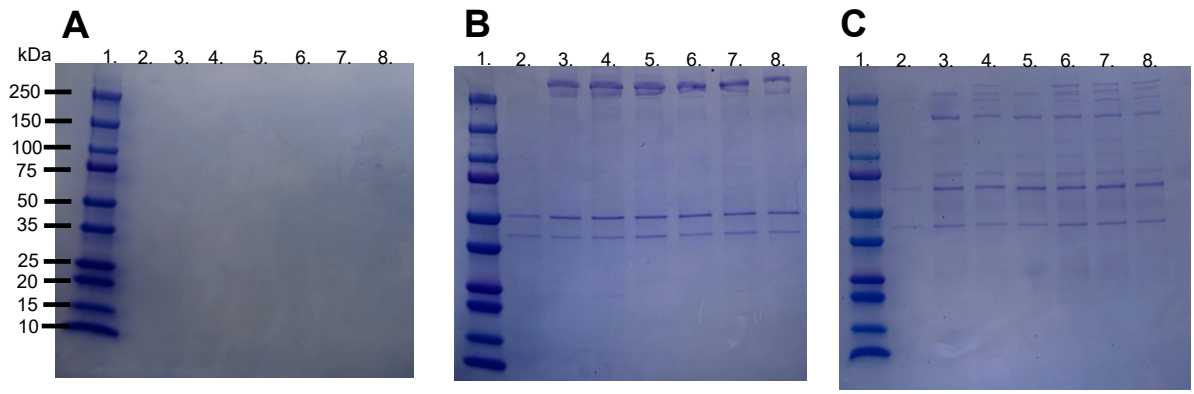
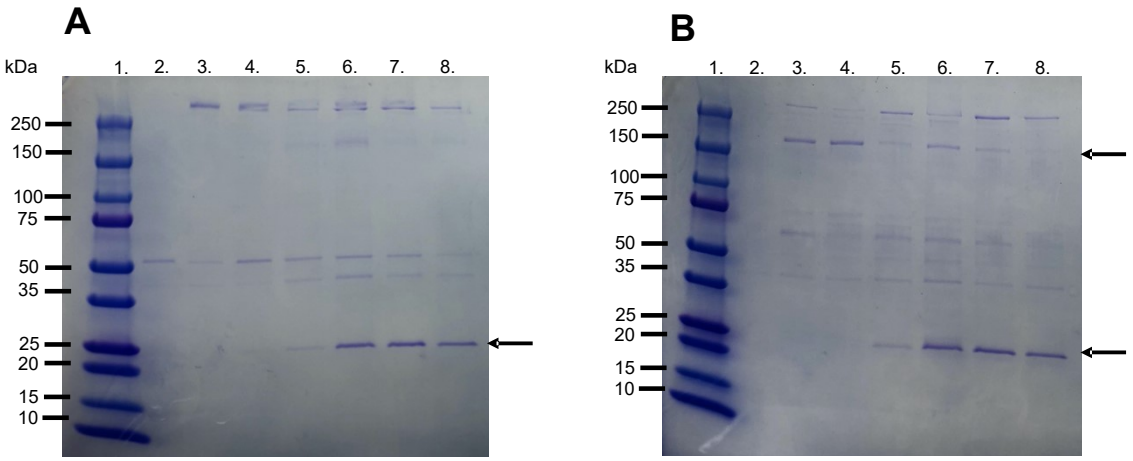
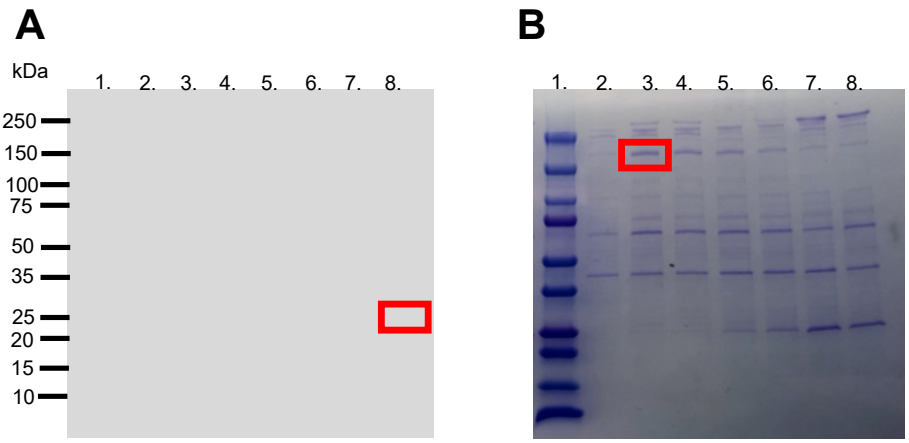


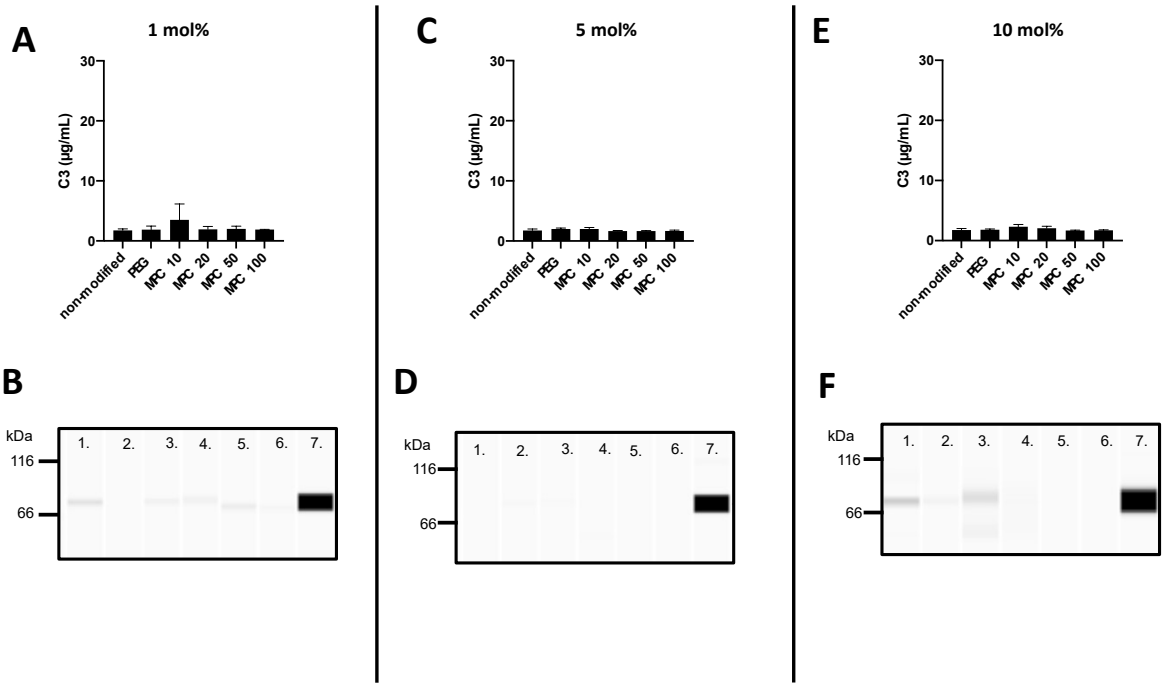
Supplement figure 1. Representative picture of SDS-PAGE gels with Coomassie Brilliant Blue staining of proteins adsorbed to liposomes modified with 1 mol% polymer-lipid after incubation in EDTA-plasma. (A) control for liposomes modified with 10 mol% polymer-lipid. The liposomes themself gives no background in this assay. (B) Liposomes modified with 1 mol% polymer-lipid, non-reduced, (C) liposomes modified with 1 mol% polymer-lipid, reduced with DTT. No apolipoprotein A-I (25 kDa) is observed, whereas the α_2-macroglobulin (180 kDa) band is observed for all the reduced liposomes. Lane 1; ladder 10-250 kDa, lane 2; PBS, lane 3; non-modified liposomes, lane 4; PEGylated liposomes, lane 5; MPC10-, lane 6; MPC20-, lane 7; MPC50- and lane 8; MPC100-liposomes. Repeated three times with plasma from three different donors.



Supplement figure 2. SDS-PAGE gels with Coomassie Brilliant Blue staining of proteins adsorbed to liposomes modified with 10 mol% polymer-lipid after incubation in lepirudin-plasma. (A) non-reduced and (B) reduced with DTT. Lane 1; ladder 10-250 kDa, lane 2; PBS, lane 3; non-modified liposomes, lane 4; PEGylated liposomes, lane 5; MPC10-, lane 6; MPC20-, lane 7; MPC50- and lane 8; MPC100-liposomes. The arrows indicate apolipoprotein A-I (25 kDa) and α_2-macroglobulin (180 kDa).



Supplement figure 3. SDS-PAGE gels with Coomassie Brilliant Blue staining of proteins adsorbed to liposomes modified with 10 mol% polymer-lipid after incubation in EDTA-plasma. The red boxes indicate which bands that were used for LC-MS/MS analysis. (A) non-reduced and (B) reduced with DTT. Lane 1; ladder 10-250 kDa, lane 2; PBS, lane 3; non-modified liposomes, lane 4; PEGylated liposomes, lane 5; MPC10-, lane 6; MPC20-, lane 7; MPC50- and lane 8; MPC100-liposomes.



Supplement figure 4. Wes immunoassay, under reduced condition with DTT, using a specific monoclonal antibody against C3 β-chain for detection of passively adsorbed C3 on liposomes modified with 1, 5 and 10 mol% polymer-lipids after incubation in EDTA plasma (n = 3). (A, C and E): quantification of the amount of surface bound C3 to liposomes at a lipid concentration of 4 mM. (B, D, F): representative Wes virtual blots of lane 1; non-modified liposomes, lane 2; PEGylated liposomes, lane 3; MPC10-, lane 4; MPC20-, lane 5; MPC50-, lane 6; MPC100-liposomes and lane 7; 5 µg/mL native C3 (for reference).