Supplemental figure legends

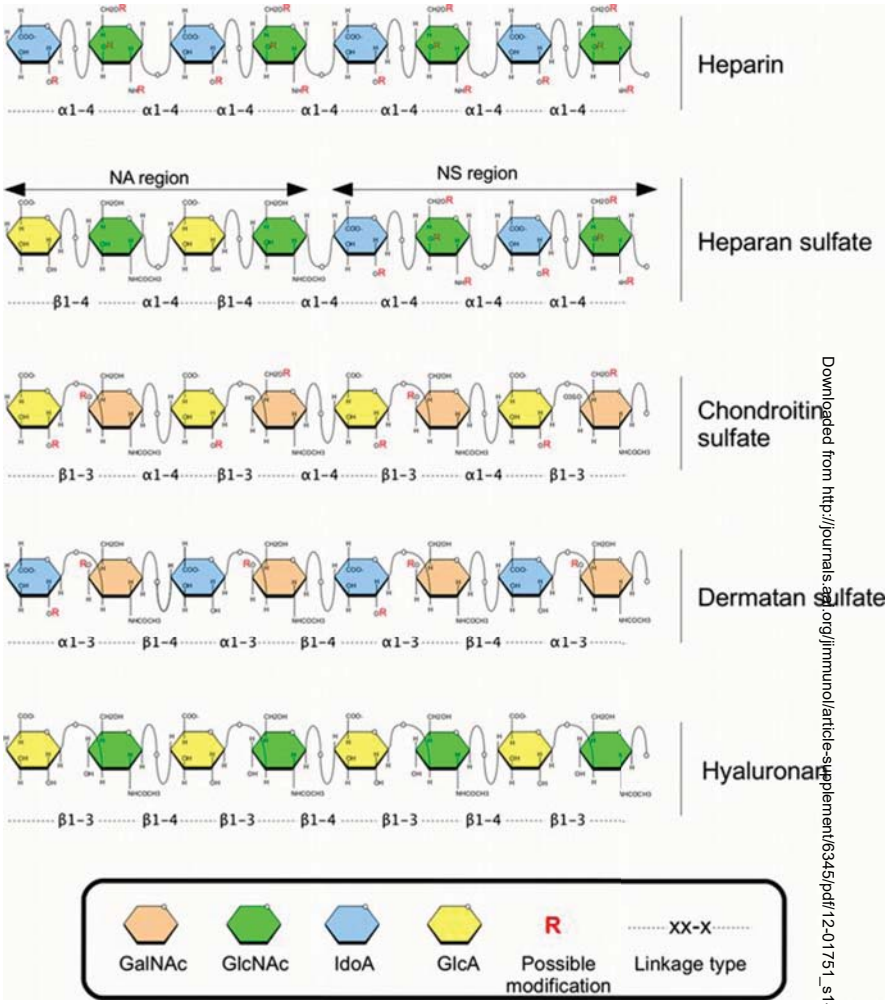
Supplemental Fig. 1. Schematic diagram showing the diverse composition of glycosaminoglycans. The five GAGs used in this study, heparin, heparan sulfate, chondroitin sulfate, dermatan sulfate and hyaluronan, are shown with their different disaccharide units, possible sulfate positions and various glycosidic linkages; R denotes positions where the functional group can be either acetate (only on N-position), H or sulfate. Heparan sulfate is shown with both N-sulfated (NS) and N-acetylated (NA) regions. N-acetylgalactosamine (GalNAc); N-acetylglucosamine (GlcNAc); galactosamine (GalN); glucuronate (GlcA) and iduronate (IdoA).

Supplemental Fig. 2. CCP19-20 binds more weakly to heparin compared to CCP6-8 402H and 402Y and does not bind CS, DS or HA. Recombinant CCP19-20 (▲) and the 402H and 402Y variants of CCP6-8 (■ and ●, respectively) were immobilized on microtiter plates and their interactions with (A) biotinylated-heparin (2IS), (B) biotinylated C4S, (C) biotinylated C6S, (D) biotinylated DS, and (E) biotinylated HA, was determined at a range of concentrations (0-1 μg/well). All values are plotted as mean absorbance (at 405 nm) determined from two independent experiments (n=4) ± s.e.m. The greater binding seen for the 402H variant of CCP6-8 compared to 402Y to 2IS heparin in (A) is consistent with our previous data (20).

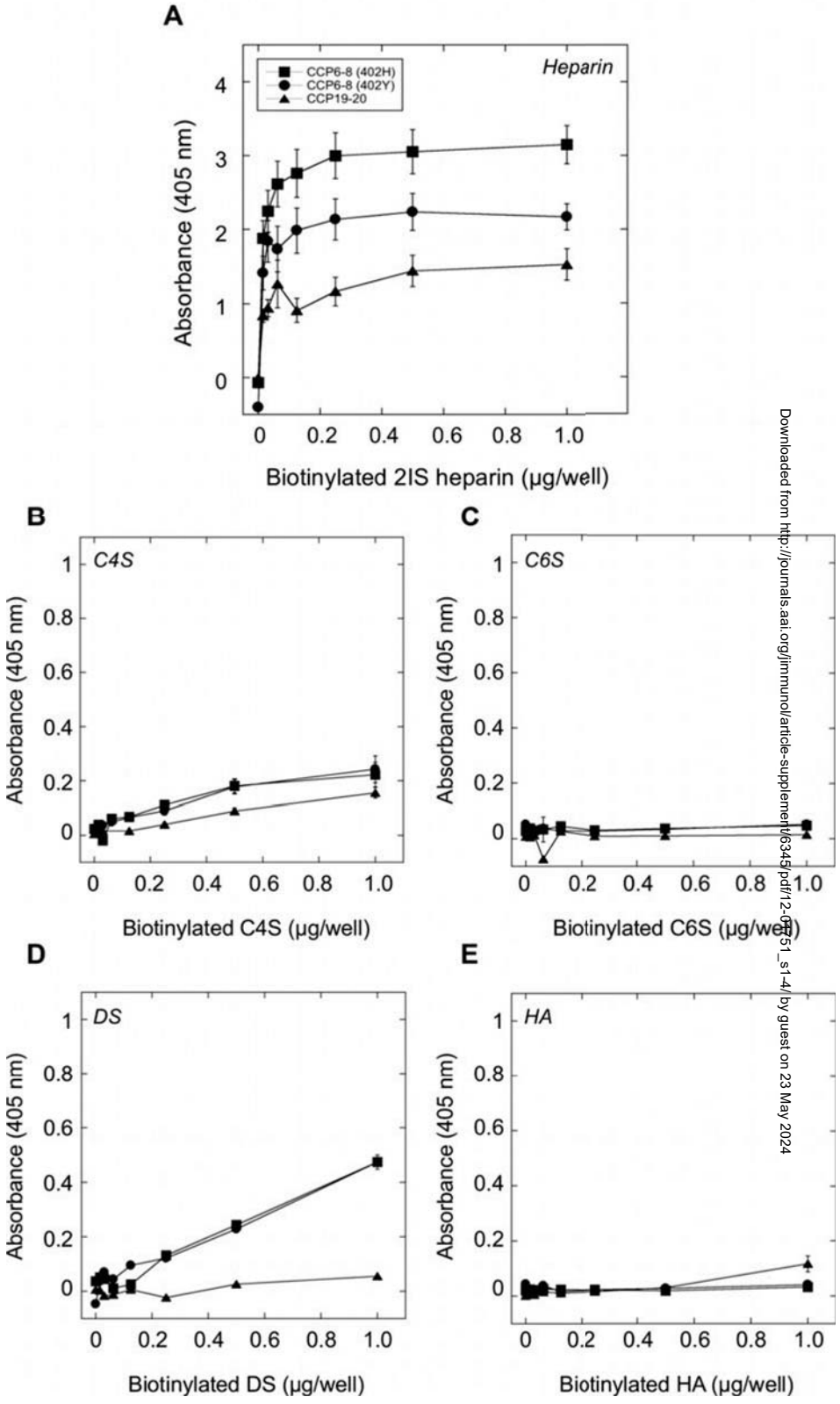
Supplemental Fig. 3. Sulfate groups of heparin play a major role in binding CCPs6-8 of CFH. The interaction of biotinyated CCP6-8 402Y (A) and 402H (B)

variants with immobilized heparin preparations was determined using the microtiter plate assay described before (20): heparin was either untreated (2IS: ●) or had been selectively desulfated: 2-O-desulfated (□); 6-O-desulfated (△); 2,6-O-desulfated (◇); N-desulfated (▽); N-desulfated re-N-acetylated (○). All values are plotted as mean absorbance (at 405 nm) determined from two independent experiments (n=4) ± s.e.m.

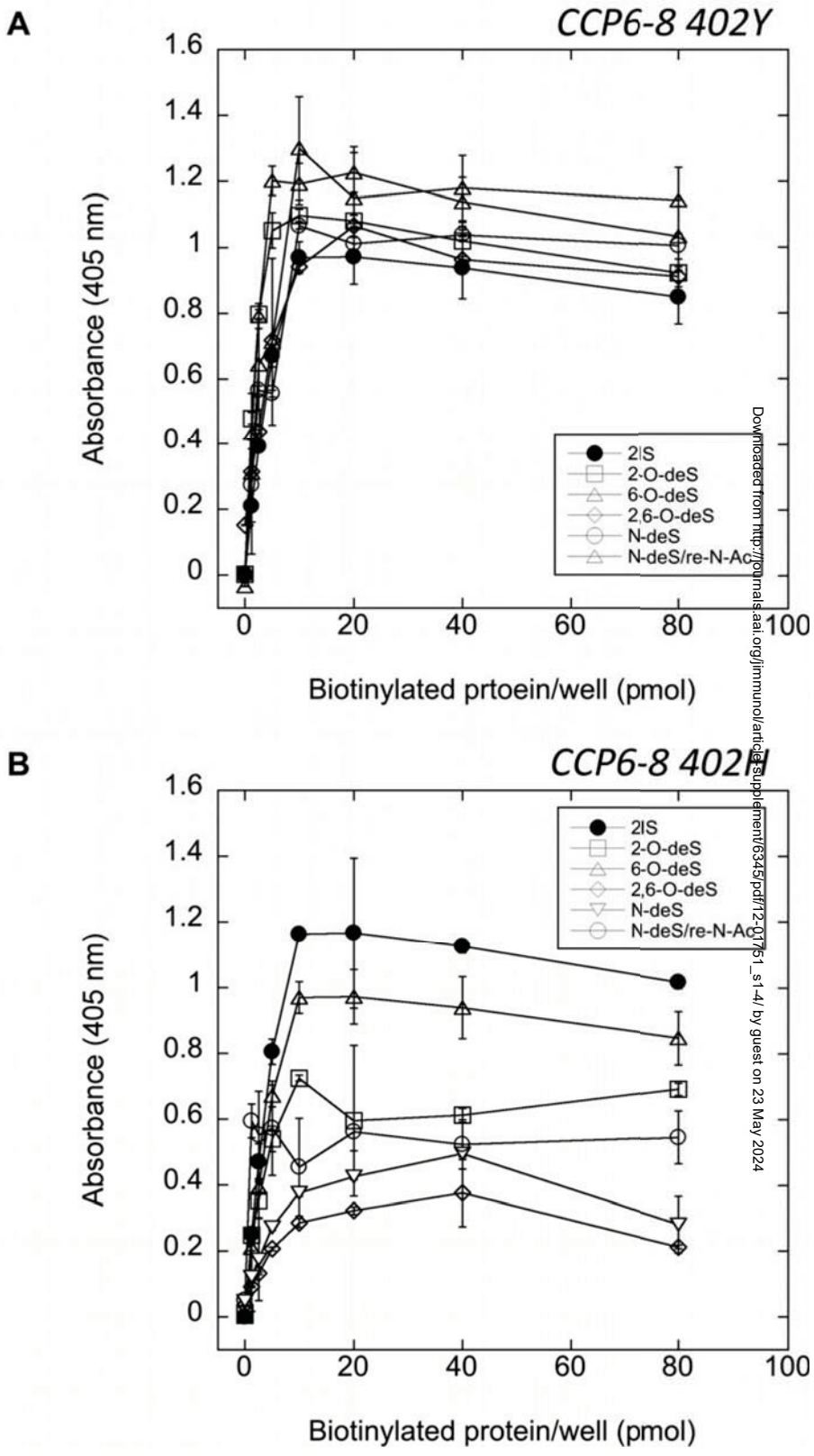
Supplemental Fig. 4. Staining for C3b deposition in normal eye and kidney tissue sections. The presence of deposited C3b was examined in eye and kidney tissues using a commercially available anti-C3b antibody (green). The antibody was tested on an eye tissue section with drusen as a control. Images are representative of the five eye donors and three kidney donors used in this study (see Table 1). The image showing positive staining of drusen is representative of two AMD donor eyes tested. Blue staining indicates the presence of cell nuclei and the scale bars represent 10 μm (eye) and 100 μm (kidney).



Supplemental Fig. 2



Supplemental Fig. 3



Supplemental Fig. 4