

Electronic Supplementary Information for

Biocompatible macromolecular two-photon initiator based on hyaluronan

(3*E*,5*E*)-*N*-[3,5-bis[[4-(dimethylamino)phenyl]methylene]-4-oxocyclohexyl]-
carbamic acid 1,1-dimethylethyl ester (Boc-MCNK)

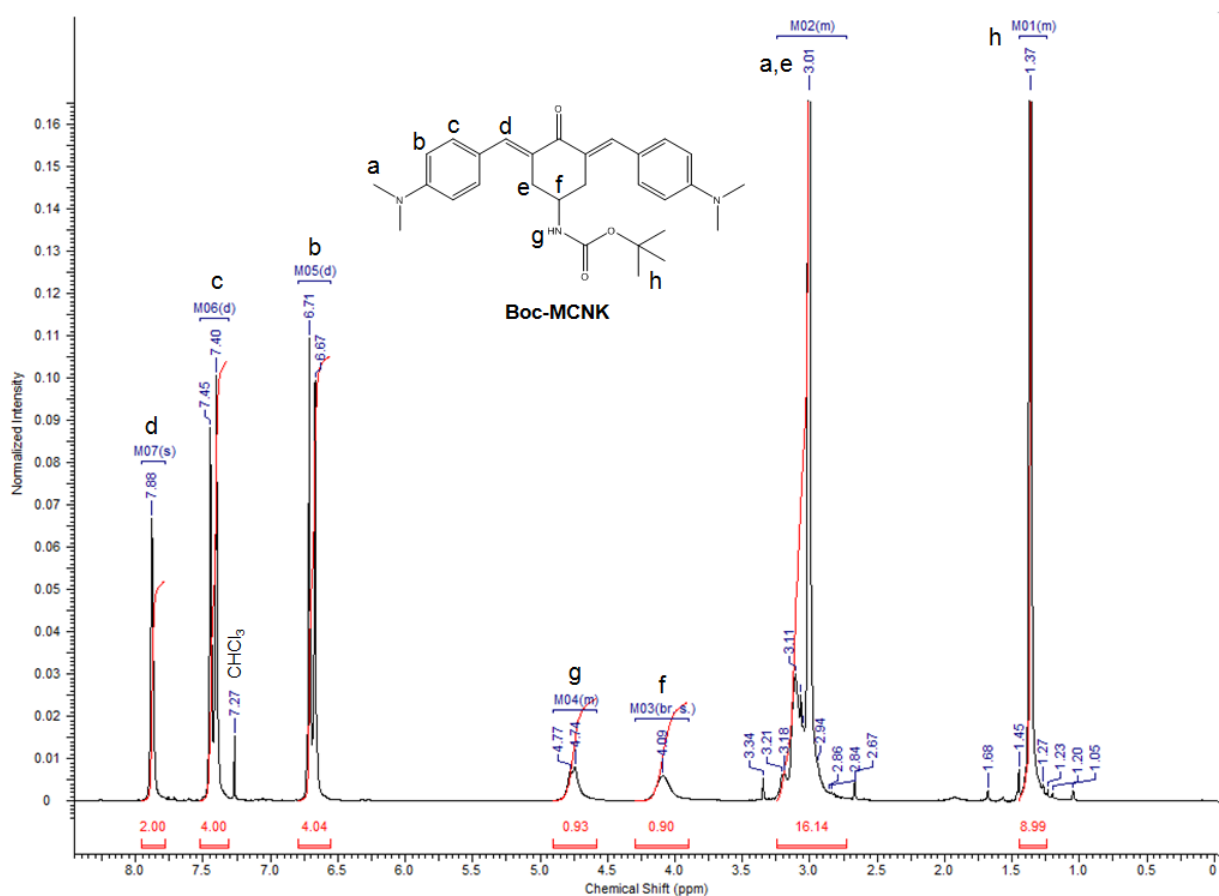


Fig. S1: ¹H NMR of Boc-MCNK

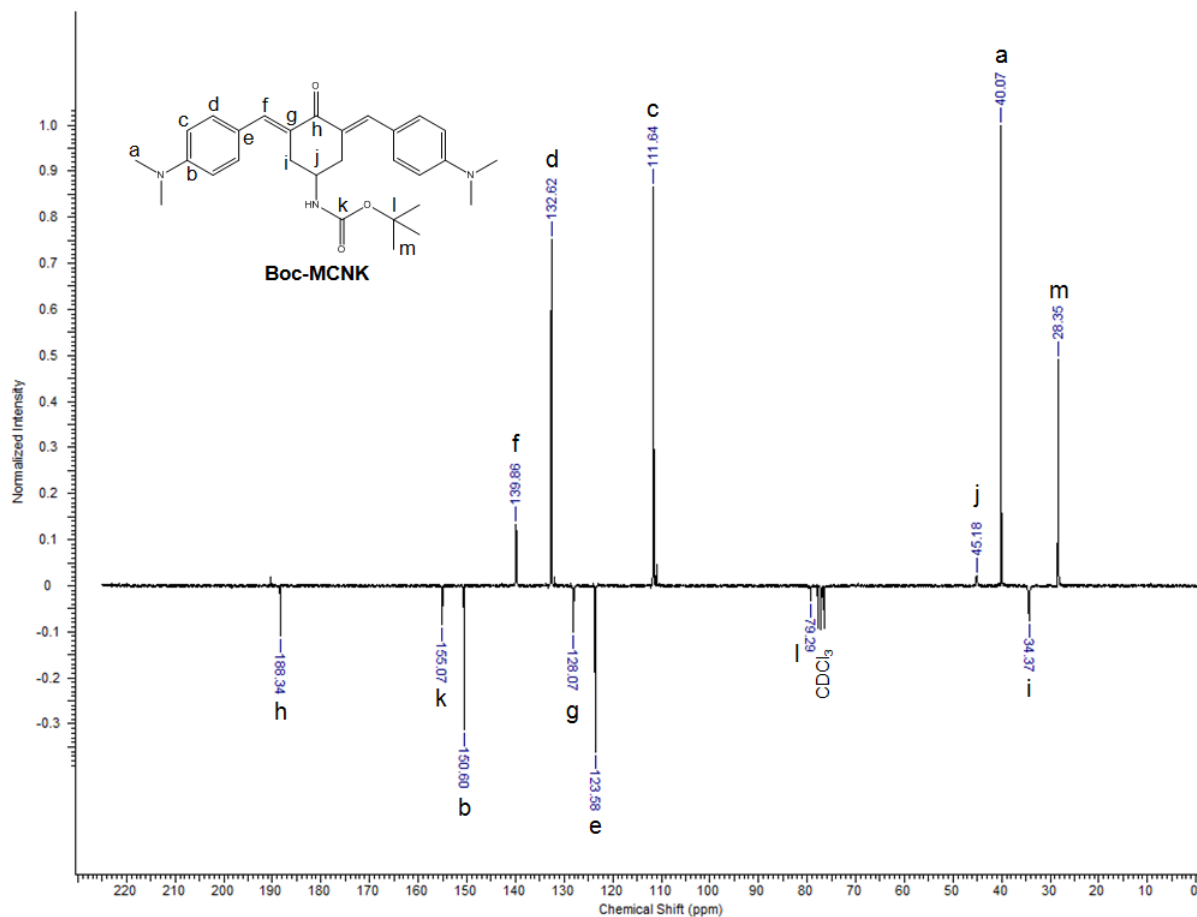


Fig. S2: ¹³C APT NMR of **Boc-MCNK**

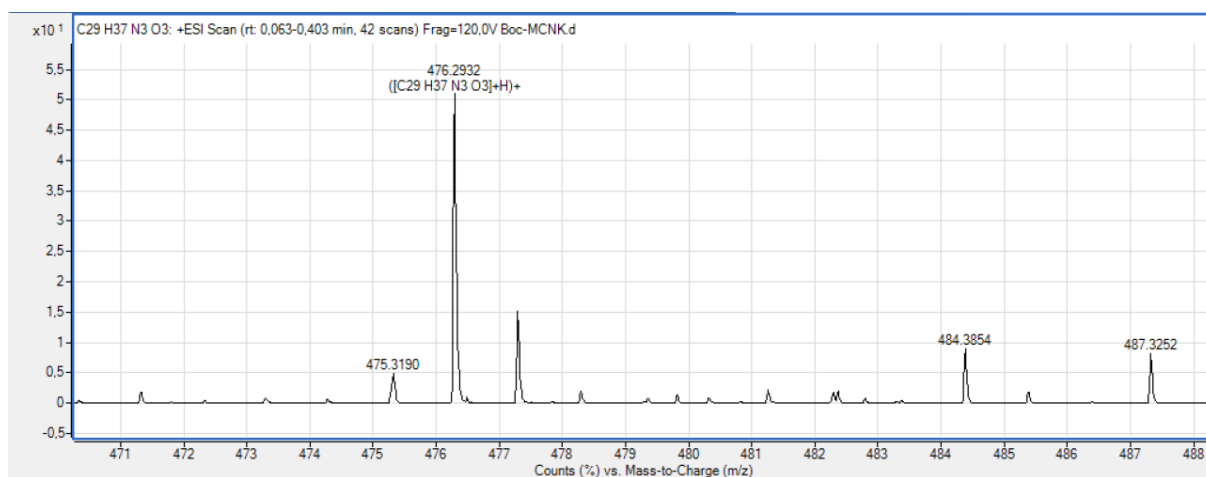


Fig. S3: HRMS showing $[M+H]^+$ -peak of **Boc-MCNK**

(2*E*,6*E*)-4-amino-2,6-bis[[4-(dimethylamino)phenyl]methylene]cyclohexanone
(MCNK)

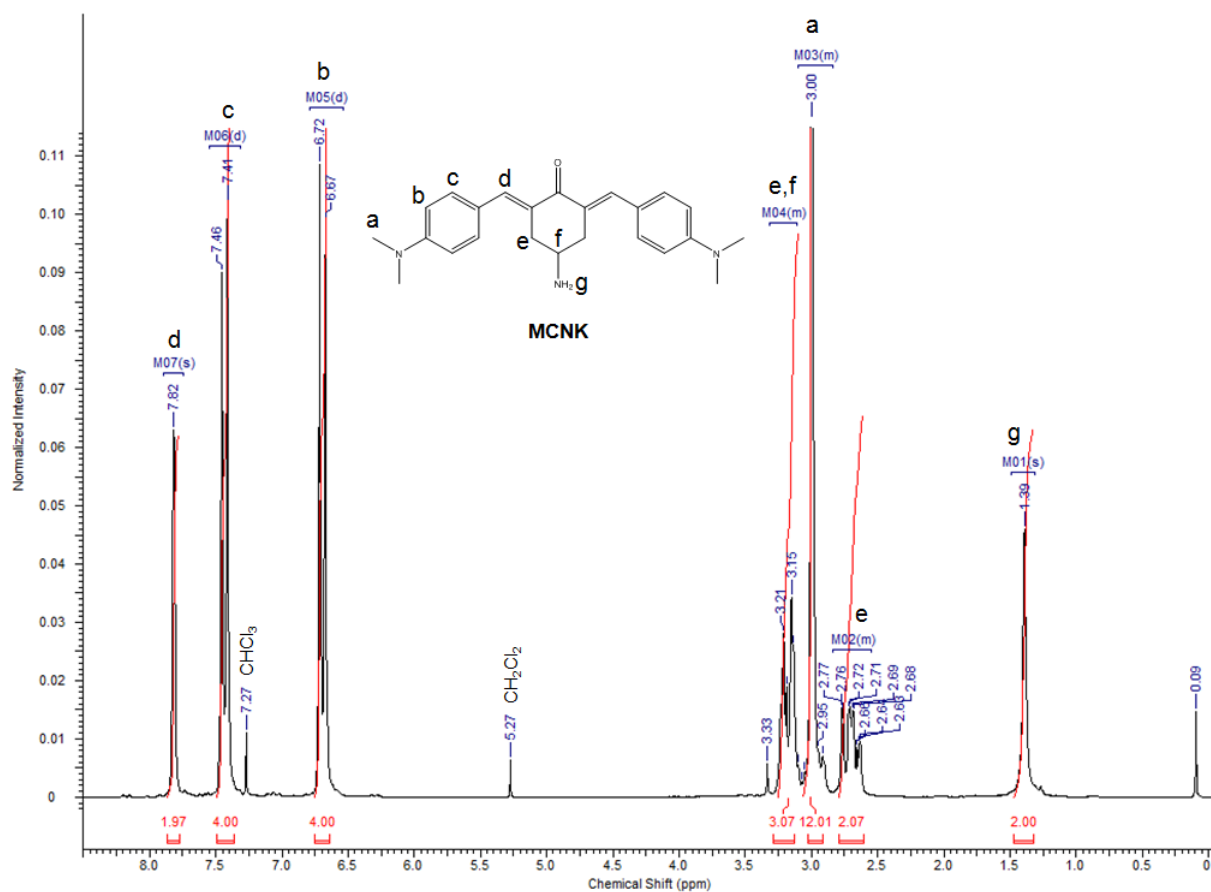


Fig. S4: ¹H NMR of MCNK

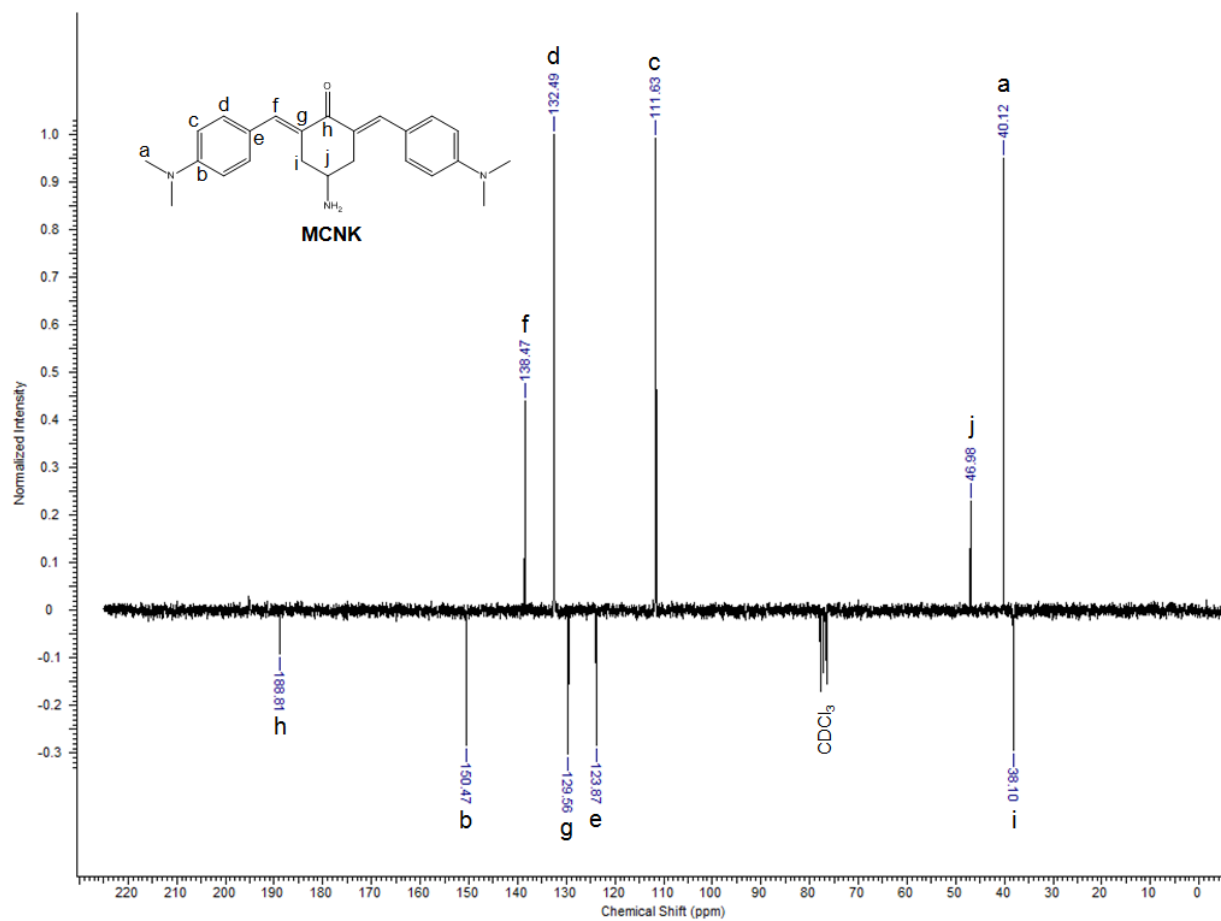


Fig. S5: ^{13}C APT NMR of MCNK

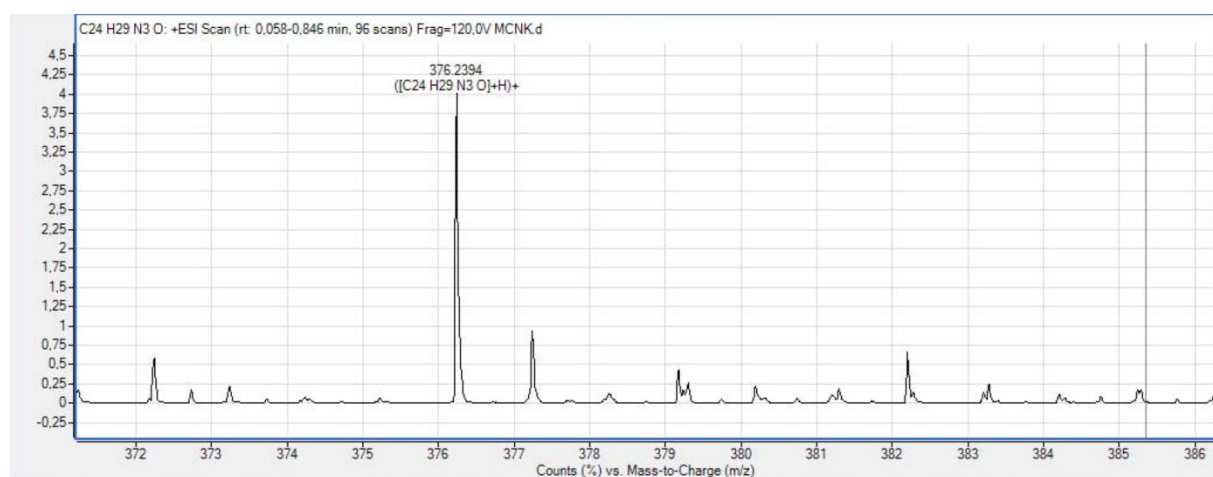


Fig. S6: HRMS showing $[\text{M}+\text{H}]^+$ -peak of MCNK

(3E,5E)-N-[4-[[3,5-bis[[4-(dimethylamino)phenyl]methylene]-4-oxocyclohexyl]amino]-4-oxobutyl]carbamic acid 1,1-dimethylethyl ester (Boc-MGABA)

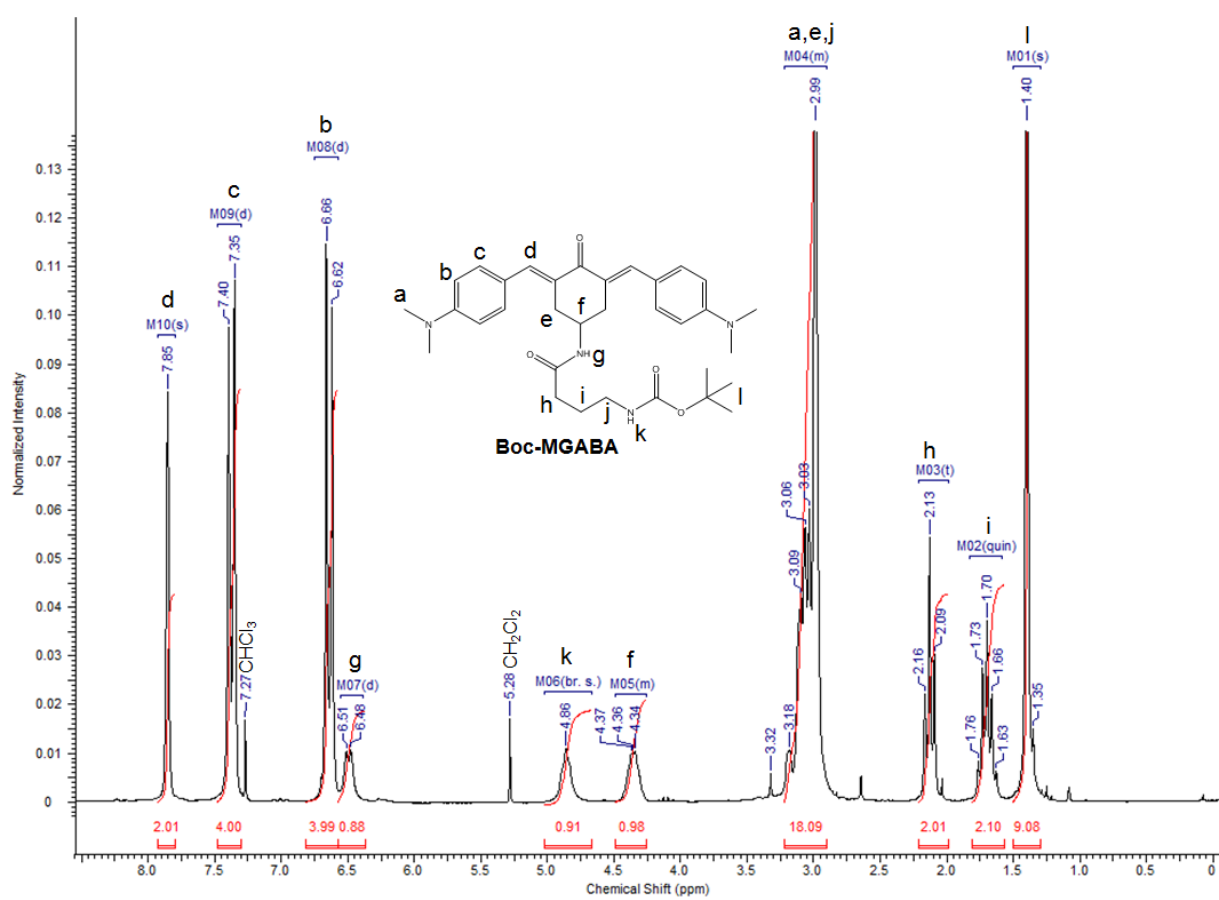


Fig. S7: ¹H NMR of Boc-MGABA

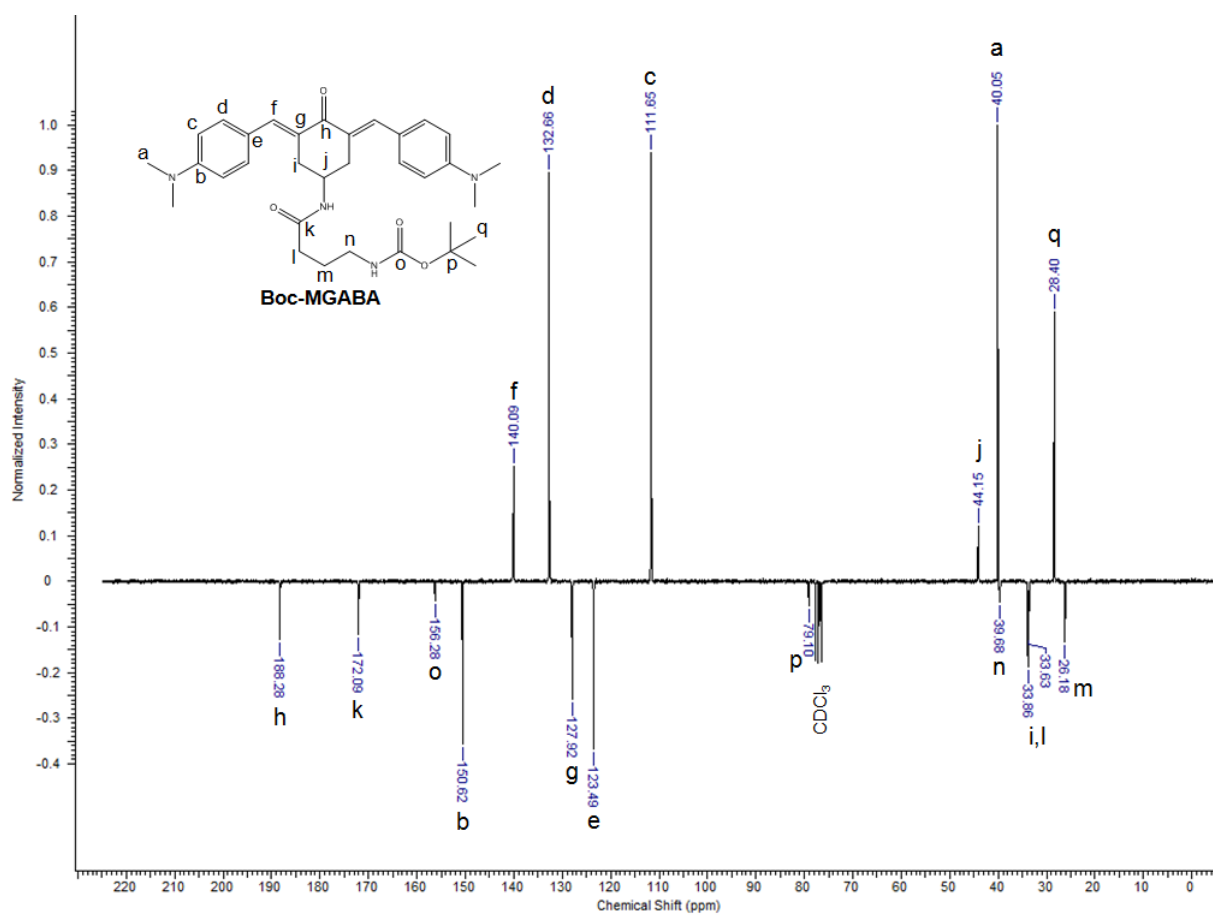


Fig. S8: ¹³C NMR of **Boc-MGABA**

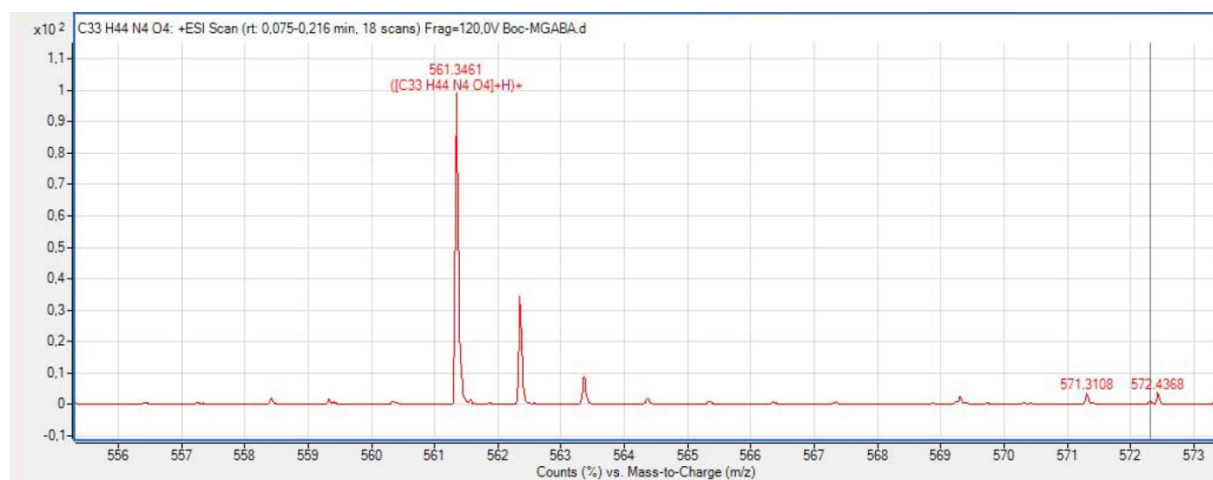


Fig. S9: HRMS showing [M+H]⁺-peak of **Boc-MGABA**

(3E,5E)-4-amino-N-[3,5-bis[[4-(dimethylamino)phenyl]methylene]-4-oxocyclohexyl]butanamide (MGABA)

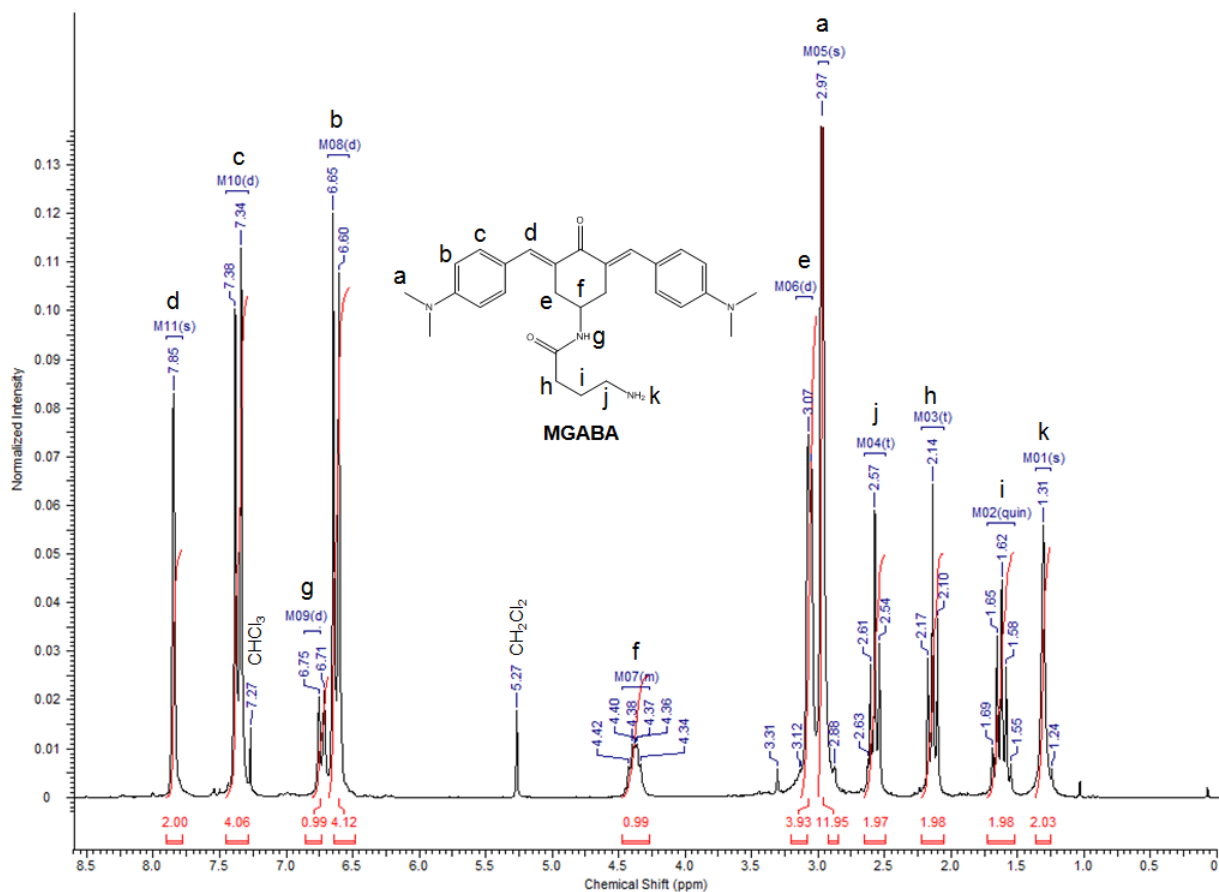


Fig. S10: ¹H NMR of MGABA

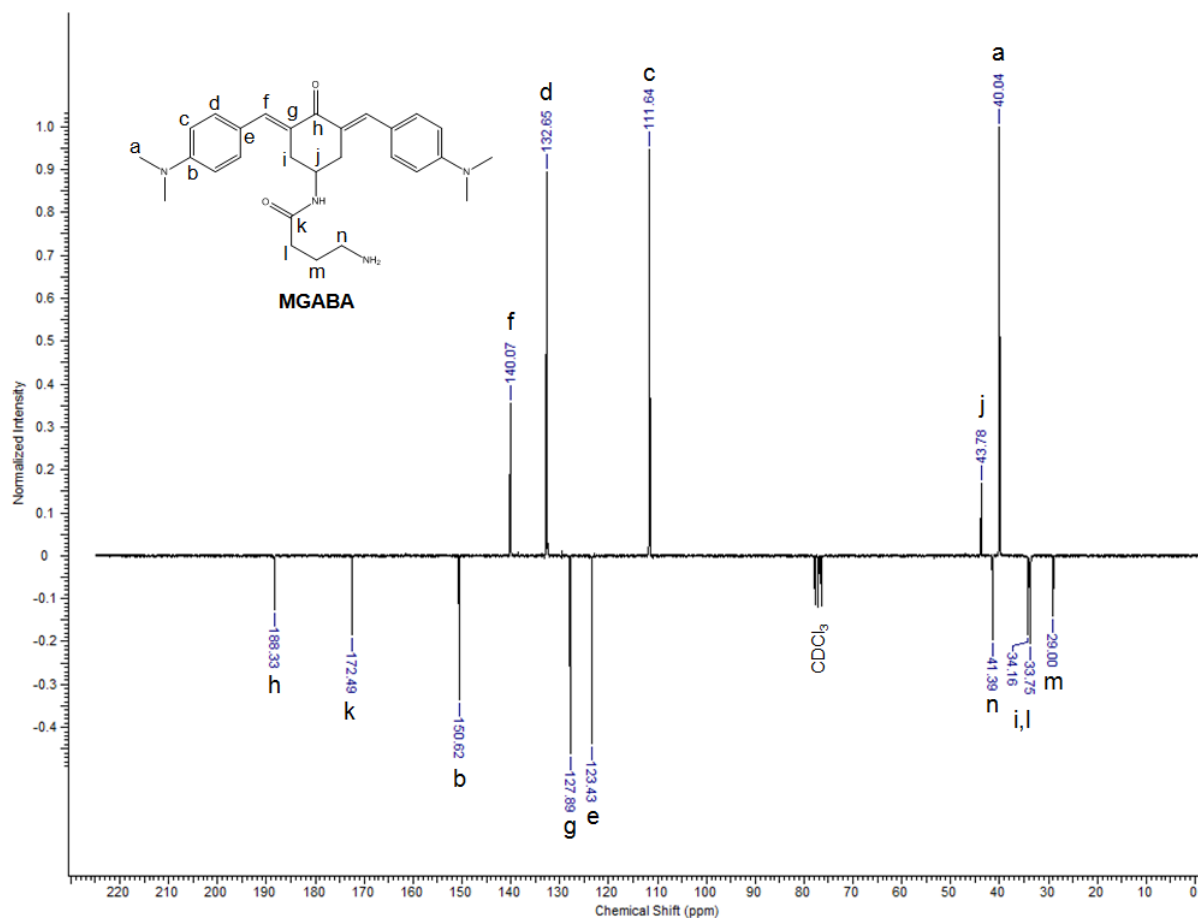


Fig. S11: ¹³C APT NMR of **MGABA**

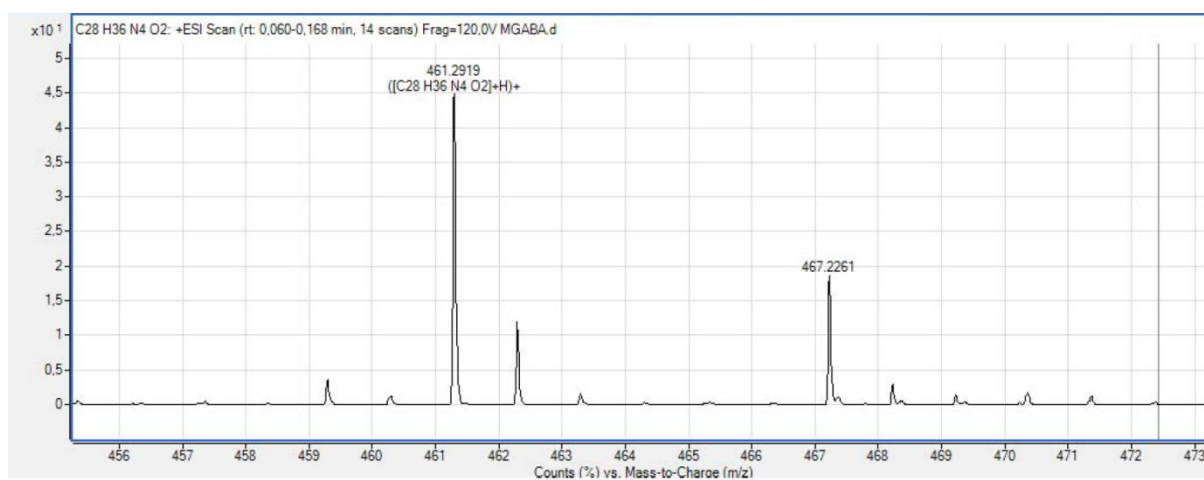


Fig. S12: HRMS showing $[M+H]^+$ -peak of **MGABA**

Hyaluronan-based photoinitiator (HAPI)

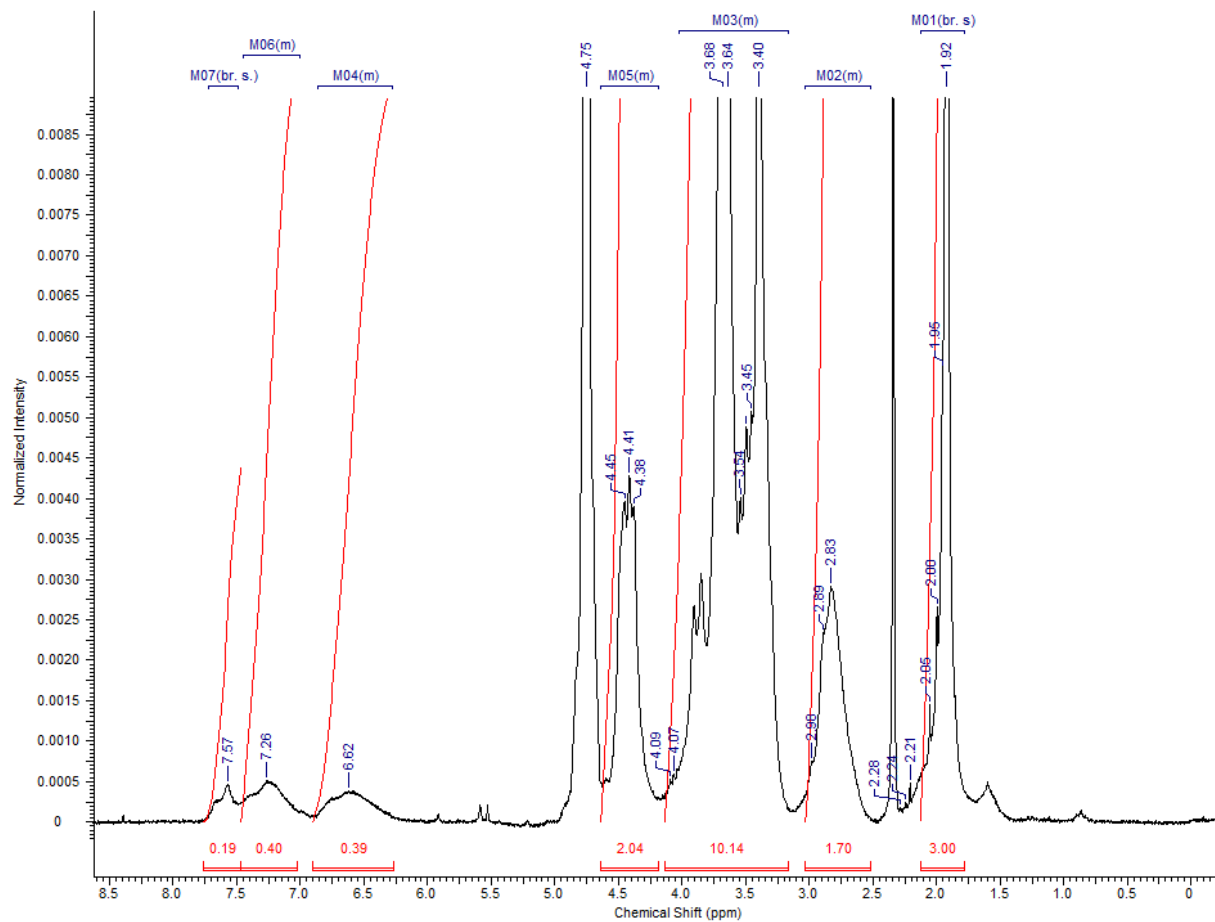


Fig. S13: ¹H NMR of HAPI

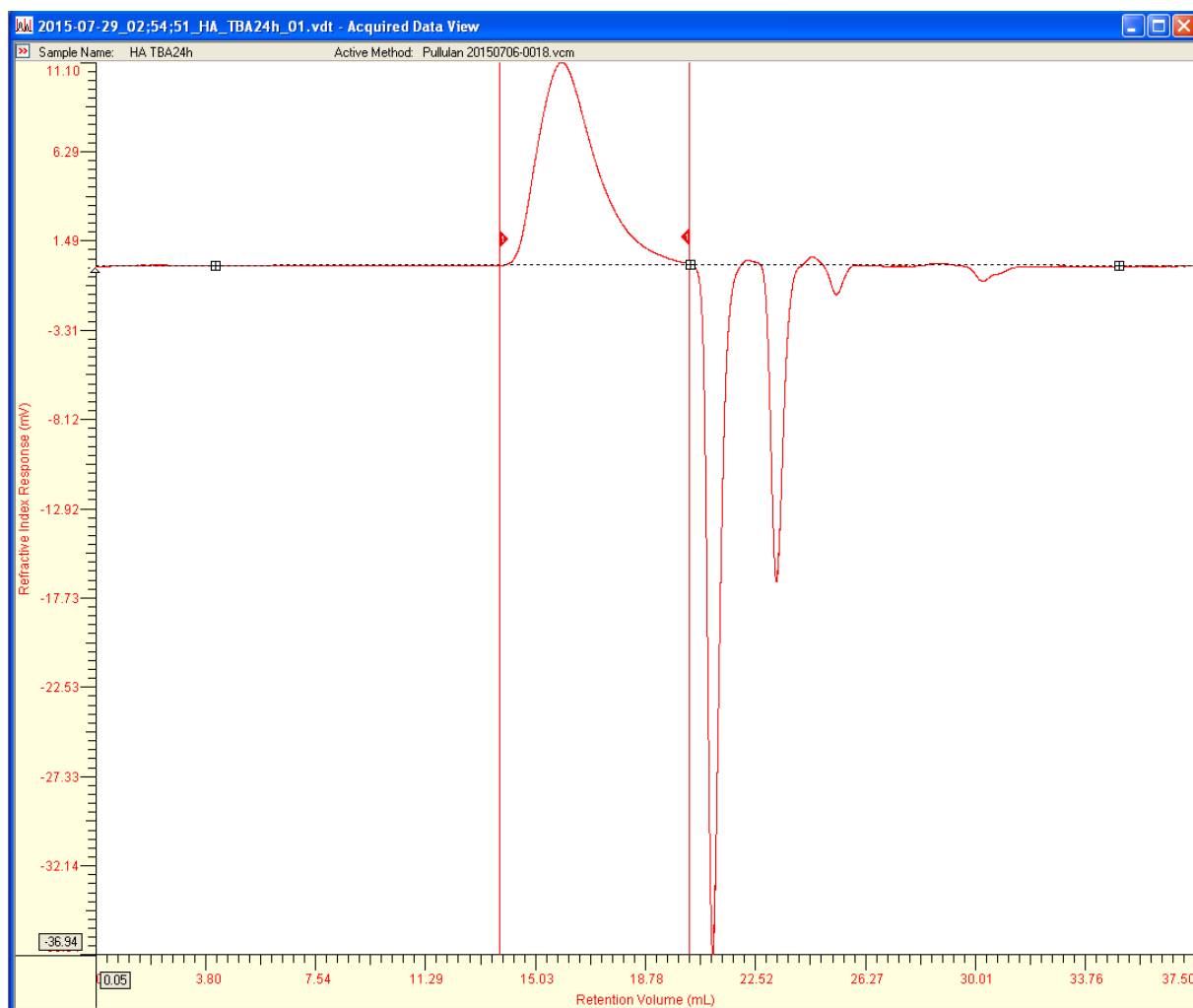


Fig. S14: GPC data of hydrolysed hyaluronan used in synthesis of **HAPI**

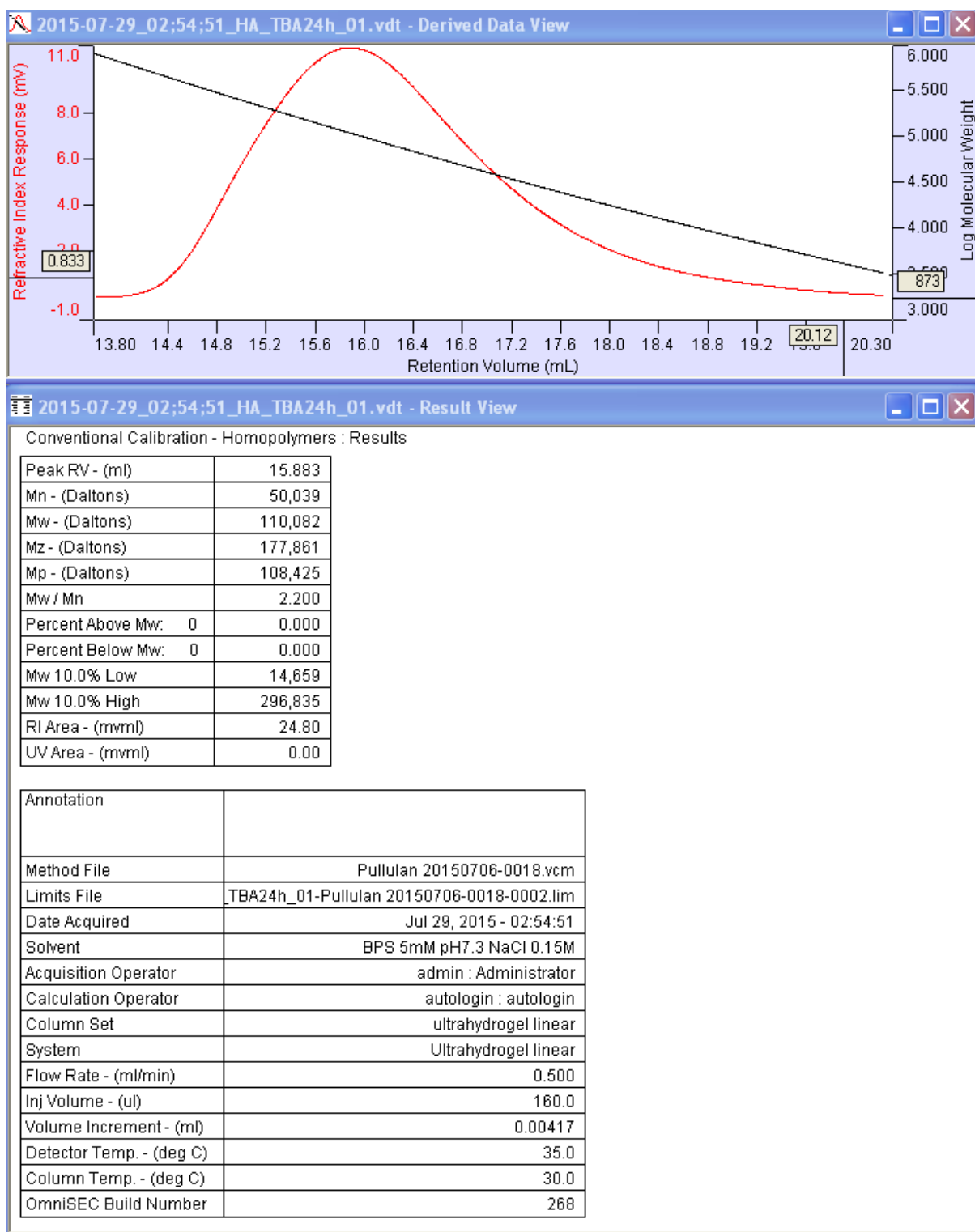


Fig. S15: GPC data of hydrolysed hyaluronan used in synthesis of HAPI