Supporting information for

αA66-80 peptide interacts with soluble α-crystallin and induces its aggregation and precipitation: A contribution to age related cataract formation

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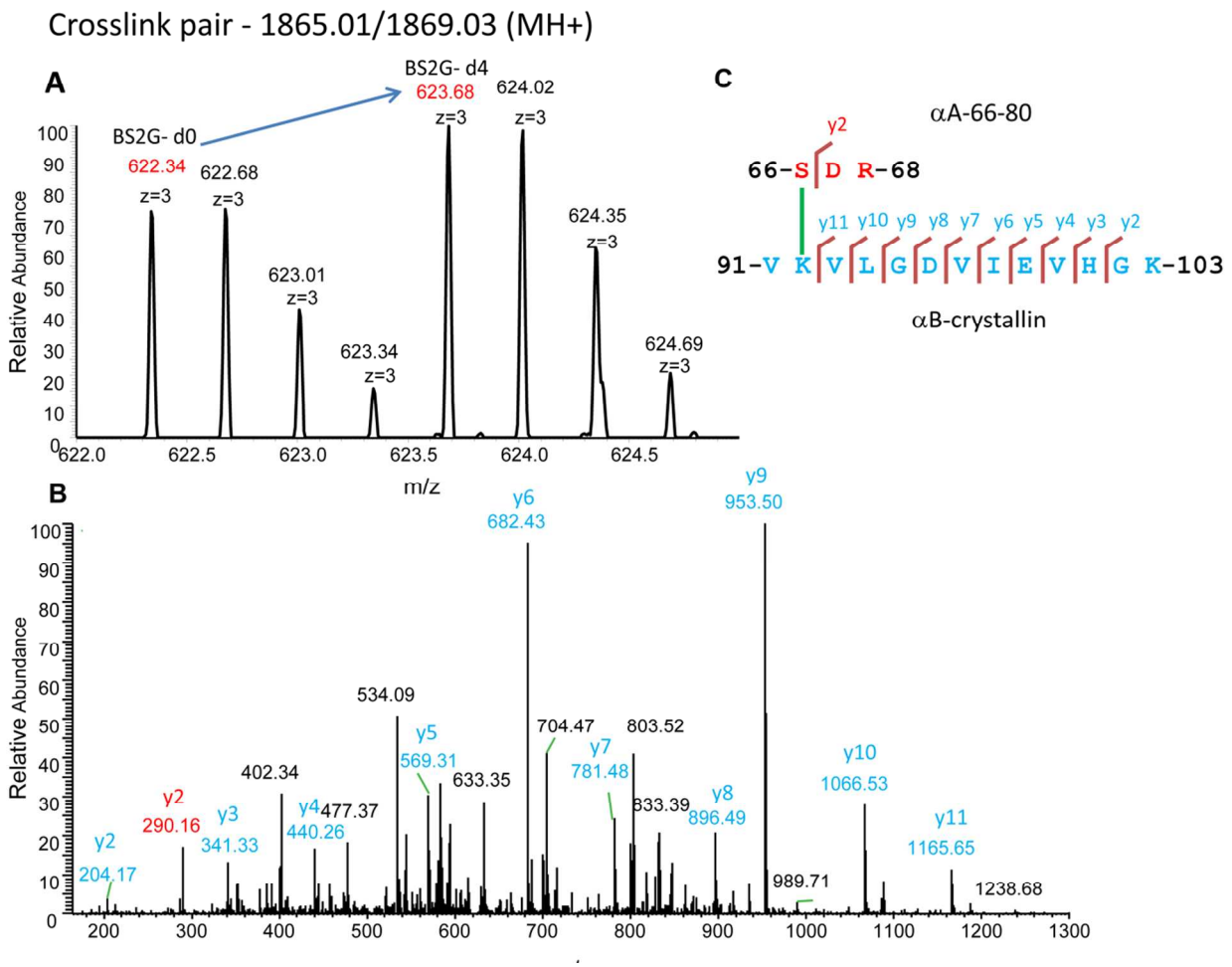

Figure S1. Nano-LC-LTQ Orbitrap identification of the αA66-80 peptide interaction with residues 91-103 of αB-crystallin. (A) Extracted ion chromatogram of tryptic digest of cross-linked complex. Signal of triply charged peptides with m/z 622.34 and 623.68, cross-linked with light (d_0) and heavy (d_4) precursor ions, presenting a mass difference of 1.34 Da, is indicated by arrow. (B) Fragmentation mass spectrum of the identified precursor ion (m/z 622.34) obtained using MS/MS. The identified y are indicated. (C) The interacting region of 66th residue of αA66-80 with Lys 92 of αB-crystallin is shown in the identified cross-linked sequences.

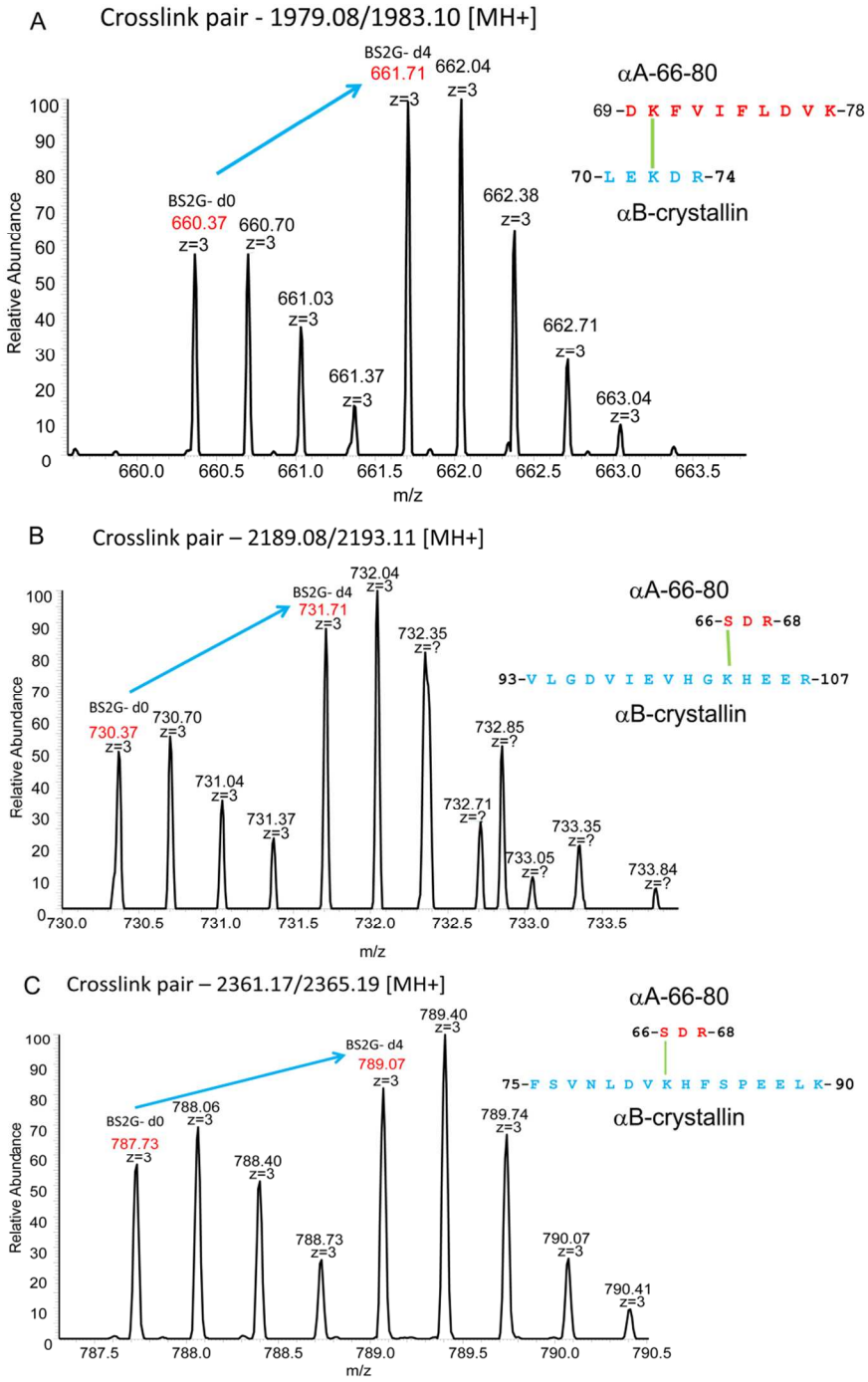

Figure S2. Cross-linked pairs identified in LC-MS spectra using GPMAW. Extracted ion chromatogram of cross-linked species showing triply charged peptides with A) m/z 660.37/661.71 pair B) m/z 730.37/731.71 pair C) m/z 787.73/789.07 pair. Each panel shows the corresponding interacting sequences in αB-crystallin and αA66-80 peptide.

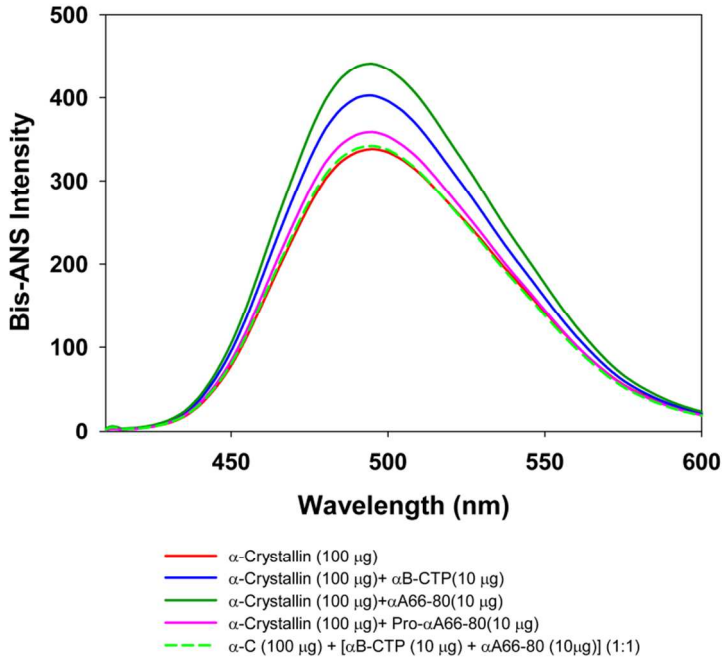

Figure S3 Bis-ANS intensity of α-crystallin in the presence of αA66-80 and αB-CTP (C-terminal peptide). α-Crystallin (100μg) was mixed with 10 μg each of αA66-80 and αB- CTP. Bis-ANS(20 μM) was added and the samples were incubated for 10 min before fluorescence measurements.