Supporting Information

Probing the Effects of Cysteine Residues on Protein Adsorption onto Gold Nanoparticles using Wild-type and Mutated GB3 Proteins

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S1. TEM image and UV-Vis absorption spectrum of the as-synthesized gold nanoparticles

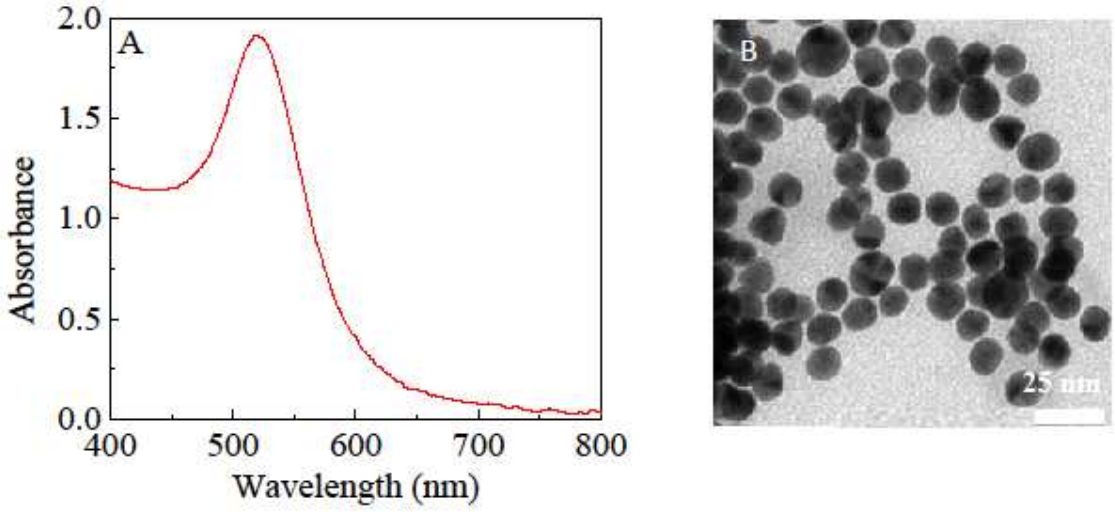

Figure S1. (A) UV-Vis spectrum of the two-time diluted AuNPs, and (B) TEM image of the as-synthesized AuNPs.

S2. Complete ^{15}N TROSY-HSQC comparison between $GB3_0$ and $GB3_1$

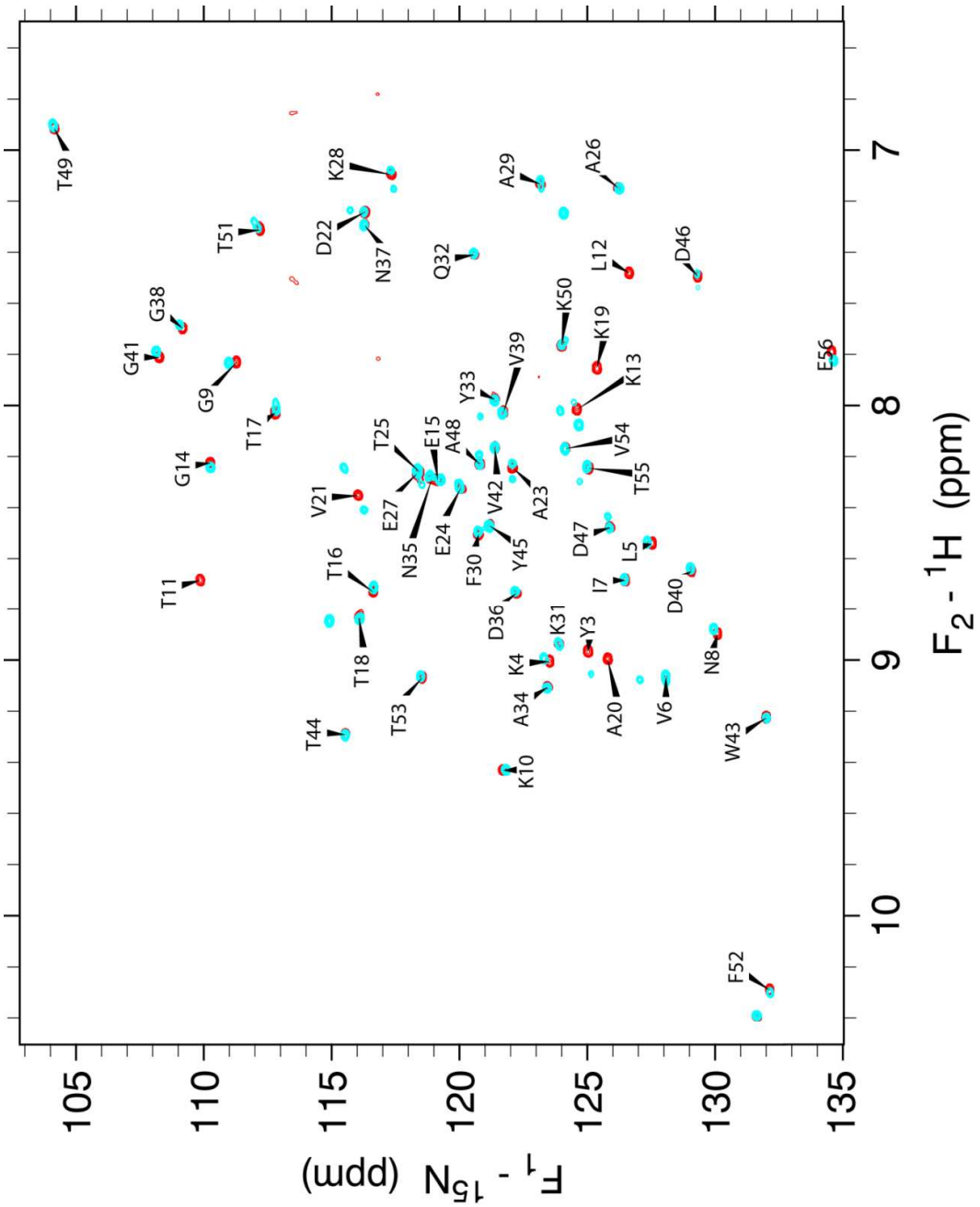

Figure S2. Complete ^{15}N TROSY-HSQC comparison between WT GB3 (red) and T11C K19C (cyan). Only residues near mutation sites show significant shifts, suggesting that the topology of the two proteins are similar.

S3. Stability of (AuNP/PEG$_1$) mixture upon organothiol adsorption

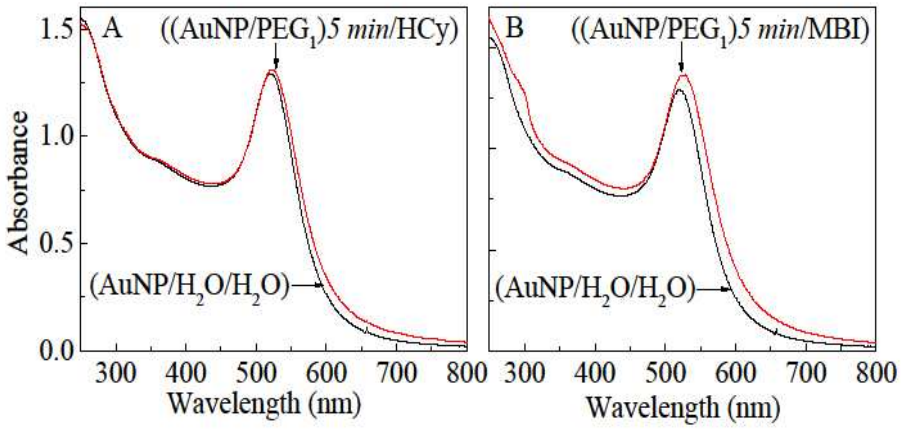

Figure S3. UV-Vis spectra of (A) ((AuNP/PEG$_1$)*5 min* /Hcy) and (B) ((AuNP/PEG$_1$)*5 min* /MBI). The samples were prepared by mixing equal volume of as-synthesized AuNPs, 30 μM PEG$_1$, and 30 μM OTs. The black spectra in both plots were obtained with the AuNP control where the as-synthesized AuNPs were diluted with water by 3 times. ((AuNP/PEG$_1$)*5 min* /OT) spectrum was acquired 24 hrs after the OT addition. The lacking of the significant red-shift in the AuNP LSPR peak in the ((AuNP/PEG$_1$)5min/OT) samples indicates that the AuNP is stabilized by PEG$_1$.