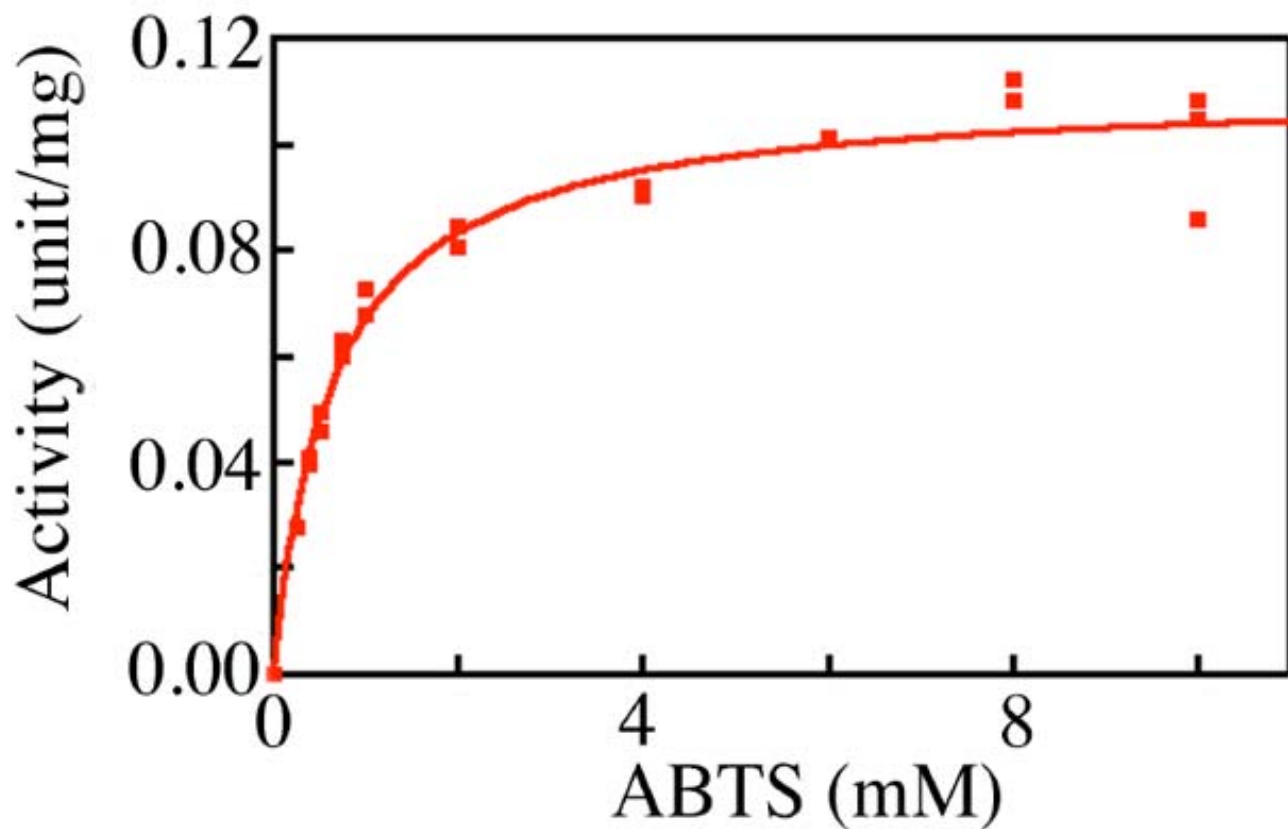
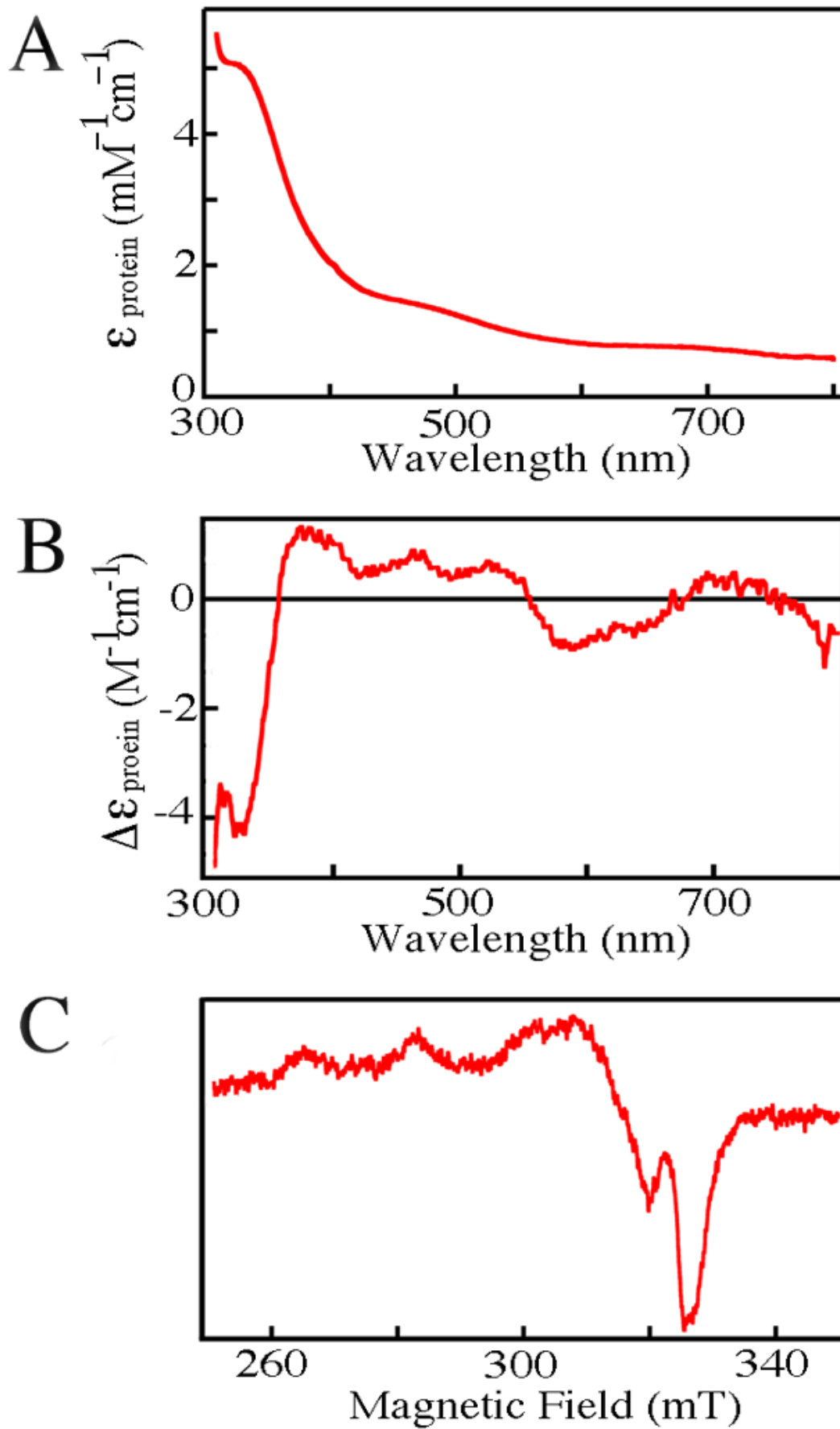


Supplemental FIGURE 1. Power saturation behaviors of the $g < 2$ EPR signals formed from rCueO (black squares) and Glu506Gln (purple squares) (A), and absorption spectra of the intermediate II (purple) and the resting (dotted purple) and reduced (black) Glu506Gln. Sample conditions were the same with those for Figure 3.



Supplemental FIGURE 2. Correlation between specific activity and ABTS concentration to determine kinetic parameters. Absorption at 420 nm was continuously measured by adding 10 μL of Glu506Gln to 990 μL of ABTS in 100 mM acetate buffer, pH 5.5 at 25°C.



Supplemental FIGURE 3. Absorption (A), CD (B) and EPR (C) spectra of Cys500Ser of $\Delta\alpha 5-7\text{CueO}$. Type II Cu EPR signal intensity was 0.1 Cu^{2+} based on a protein molecule, and the residual 0.9 Cu were not detected by EPR.