



Supplementary Figure S3. SDS-PAGEs of *Populus* GRXs and mutants of PtGRXB4. The names of the GRX proteins were marked below each SDS-PAGE map. The names of the GRX proteins that were not expressed in *E. coli* were marked in red. The lanes in each SDS-PAGE map were as follows: Lane 1, protein molecular mass markers with the sizes shown on the left in kilodaltons; Lane 2: the total cell lysate of IPTG-induced *E. coli* harboring empty expression vector (negative control); Lane 3: total cell lysate of IPTG-induced *E. coli* harboring recombinant GRX plasmids; Lane 4: total supernatant of IPTG-induced *E. coli* harboring recombinant GRX plasmids; Lane 5: total cell precipitate of IPTG-induced *E. coli* harboring recombinant GRX plasmids; Lane 6: purified GRX proteins from affinity chromatography; Lane 7: the monomeric GRXs isolated by size-exclusion chromatography.

Supplementary Figure. S3. (continued)

