

## **Cloning and Characterization of a Tau Glutathione S-transferase Subunit Encoding Gene in *Gossypium hirsutum***

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A predicted tau glutathione S-transferase (GST) subunit encoding gene, named *GhGST*, was isolated from *Gossypium hirsutum* with RACE method from SSH library based on *Verticillium dahliae* stress. The data revealed an open reading frame of 678 bp encoding a protein of 225 amino acids with a molecular weight of 25.821 kDa. Semi-quantitative RT-PCR analysis showed that the mRNA of *GhGST* was expressed in roots, stems, and leaves. And the content of *GhGST* expression increased under *Verticillium dahliae* stress in roots. The expression of *GhGST* gene was verified by transformation in *E. coli* BL21 (DE3) strain with the recombinant expression vector pET-32A. GST activity assay showed the crude *GhGST* protein had obvious activity to 1-chloro-2,4-dinitrobenzene (CDNB) substrate.