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 SS1 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.