

GST, His

Description: Recombinant *Schistosoma japonicum* GST full length protein contains 244 amino acids (1-224 a.a.) expressed in *E. coli*, having a molecular mass of 28.3 kDa. The GST protein is fused to 20 amino acid His-Tag at N-terminus. The GST protein is purified by proprietary chromatographic techniques.

Synonyms: Glutathione S-Transferase, GST, Glutathione S-transferase class-mu 28 kDa isozyme, GST 28, EC 2.5.1.18, Sj28GST, Sj28 antigen.

Source: *Escherichia coli*.

Physical Appearance: Sterile Filtered clear solution.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH MSPILGYWKI KGLVQPTRLL
LEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID GDVCLTQSMARIYIADKHN
MLGGCPKERA EISMLEGAVL DIRYGVSRIS YSKDFETLKV DFLSKLPEML KMFEDRLCHK
TYLNGDHVTH PDFMLYDALDVVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSKYIA
WPLQGWQATF GGGD

Purity: Greater than 95% as determined by SDS-PAGE.

Formulation:

GST is supplied in PBS pH 7.4 & 10% glycerol.

Stability:

Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months. Please prevent freeze-thaw cycles.

Usage:

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Introduction:

Antioxidant enzyme Glutathione S- Transferase (GST) is thought to do the primary cellular defense mechanism against reactive oxygen species. GST reduces lipid hydroperoxides through its Se-independent glutathione peroxidase activity. The enzyme also detoxifies lipid peroxidation end products such as 4-hydroxynonenal (4-HNE). The soluble GST is a 26 kDa protein which occurs as a dimer in all aerobic organisms. Each monomer has two domains, one that binds GSH and is an α -structure similar to thioredoxin and the other, all helical, that binds the hydrophobic substrate. The GST -fusion protein expression system is a widely used recombinant protein expression system that allows a peptide or a regulatory protein domain to be expressed as a fusion to the C-terminus of *Schistosoma japonicum* GST. Fusion proteins also possess GST -enzymatic activity and can undergo dimerization similar to *in vivo*. The fusion protein can be purified via GST -affinity column chromatography. In most cases, the desired peptides or domains are removed from GST by applying a specific protease that recognizes and cleaves the linker between the protein domain and GST. The technique has been widely used to generate different kinds of proteins for crystallization, molecular immunology studies, the production of vaccines and studies involving protein-protein and protein-DNA interactions.

Biological Activity:

2.8-3.3 units/mg, & is defined as the amount of enzyme that conjugate 1.0 u mole of
1-chloro-2,4-dinitrobenzene (CDNB) with reduced glutathione per minute at pH-6.5 at 25C.



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