

## 32-6781: GST, 218 a.a.

**Application :** Functional Assay

**Alternative Name :** Glutathione S-Transferase, GST, Glutathione S-transferase class-mu 28 kDa isozyme, GST 28, EC 2.5.1.18, Sj28GST, Sj28 antigen, Sj26 antigen.

### Description

Source: Escherichia Coli.

Sterile Filtered clear solution.

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  $\alpha$ -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.

GST Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 218 amino acids (1-218 a.a) and having a molecular mass of 25.4kDa

### Product Info

**Amount :** 2  $\mu$ g / 10  $\mu$ g

**Purification :** Greater than 90.0% as determined by SDS-PAGE.

**Content :** GST protein solution (1mg/ml) containing PBS and 10% glycerol.

**Storage condition :** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Amino Acid :** MSPILGYWKI KGLVQPTRLLEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID GDVKLTQSMA IIRYIADKHN MLGGCPKERA EISMLEGAVL DIRYGVSRISYKDFETLKV DFSLKLP EML KMFEDRLCHK TYLNGDHSVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSKYIA WPLQGWQATF GGGDHPPK. Å

### Application Note

The Specific activity is > 30 units/mg, and is defined as the amount of enzyme that conjugate 1.0 umole of 1-chloro-2,4-dinitrobenzene (CDNB) with reduced glutathione per minute at pH 6.5 at 25C.