Product Data Sheet

Product Name:	GST, His
Cat. No.:	GP21735
Batch No.:	1

Product Data

Purity	>98%	Source	Escherichia Coli.
Phycical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glutathione S-Transferase; GST; Glutathione S-transferase class-mu 28 kDa isozyme; GST 28; EC 2.5.1.18; Sj28GST; Sj28 antigen.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSHMSPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID GDVKLTQSMAIIRYIADKHN MLGGCPKERA EISMLEGAVL DIRYGVSRIA YSKDFETLKV DFLSKLPEML KMFEDRLCHK TYLNGDHVTH PDFMLYDALDVVLYMDPMCL DAFPKLVCFK KRIEAIPQID KYLKSSKYIA WPLQGWQATF GGGDHPPKSD LVPR.		
Formulation	GST is supplied in PBS pH 7.4 & 10% glycerol.		

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 /-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

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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.

Stability

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.

Background

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

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