
Product Data Sheet

Product Name: GSTP1 Mouse

Cat. No.: GP21755

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glutathione S-transferase P 1; Gst P1; GST YF-YF; GSTclass-pi; GST-piB; Preadipocyte growth factor.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH MGSMPPTYTIV YFPVRGRCEA MRMLLADQGQ SWKEEVVTID TWMQGLLKPTCLYGQLPKFE DGDLTLYQSN AILRHLGRSL GLYGKNQREA AQMDMVNDGV EDLRGKYVTL IYTNYENGKNDYVKALPGHL KPFETLLSQN QGGKAFIVGD QISFADYNLLDLLLIHQVLA PGCLDNFPLL SAYVARLSAR PKIKAFLLSSP EHVNRPINGNGKQ.		
Formulation	GSTP1 protein solution (1mg/ml) containing PhosphateBuffered Saline (pH 7.4) and 10% glycerol.		

Introduction

GSTP1 is a polymorphic gene encoding active, functionally different GSTP1 variant proteins that are believed to function in xenobiotic metabolism and have a part in susceptibility to cancer, and other diseases. GSTP1 is a glutathione S-transferase belonging to the pi class. GST family enzymes play a significant role in detoxification by catalyzing the conjugation of many hydrophobic and electrophilic compounds with reduced glutathione. Based upon the biochemical, immunologic and structural properties of the soluble GSTs they are grouped into 4 main classes: alpha, mu, pi, and theta. The GSTP1 enzyme acts by catalyzing the reaction of glutathione with an acceptor molecule to form a Sulfur-substituted glutathione. The reactions employing glutathione contribute the transformation of a broad range of electrophiles, including reactive products of lipid, protein, carcinogens, therapeutic drugs, environmental toxins, and products of oxidative stress. The GSTP1 inactivation through CpG hypermethylation is frequent in pituitary adenomas and may be a factor in aggressive pituitary tumor behavior. GSTP1 is may be a transcriptional target of the p53 tumor suppressor gene.

Caution: Product has not been fully validated for medical applications. For research use only.

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Single-nucleotide polymorphism in GSTP1 is linked to modified protein binding, which influence GSTP1's contribution to carcinogen and drug metabolism, and possibly disease pathogenesis and/or drug response. GST-pi might have central roles in proliferation of androgen-independent human prostate cancer cells.

Biological Activity

Specific activity is > 40 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.

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

GSTP1 Mouse Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 233 amino acids (1-210 a.a) and having a molecular mass of 26kDa. GSTP1 is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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