Active Recombinant Human GSTA4 protein, His-tagged

Cat. No. GSTA4-24H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human GSTA4 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	GSTA4, also known as glutathione S-transferase A4, belongs to the GST superfamily. This enzyme is involved in cellular defense against toxic, carcinogenic, and pharmacologically active electrophilic compounds. GSTA4 shows very high activity with reactive carbonyl compounds such as alk-2-enals. GSTA4 is highly effective in catalyzing the conjugate addition of reduced glutathione to 4-hydroxynonenal, an important product of peroxidative degradation of arachidonic acid and a commonly used biomarker for oxidative damage in tissue. This enzyme is expressed at a high level in brain, placenta, and skeletal muscle and much lower in lung and liver.
Form	Liquid. In 20 mM Tris-HCl buffer (pH8.0), 2mM DTT, 20% glycerol, 100mM NaCl
Bio-activity	Specific activity is >4,000 pmol/min/ug, and 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.
Molecular Mass	28.3kDa (246aa) confirmed by MALDI-TOF
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSHMAARPK LHYPNGRGRM ESVRWVLAAA

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	GVEFDEEFLE TKEQLYKLQD GNHLLFQQVP MVEIDGMKLV QTRSILHYIA DKHNLFGKNL KERTLIDMYV EGTLDLLELL IMHPFLKPDD QQKEVVNMAQ KAIIRYFPVF EKILRGHGQS FLVGNQLSLA DVILLQTILA LEEKIPNILS AFPFLQEYTV KLSNIPTIKR FLEPGSKKKP PPDEIYVRTV YNIFRP
Purity	>95% by SDS - PAGE
Storage	Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.
Concentration	1 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name	GSTA4 glutathione S-transferase alpha 4 [Homo sapiens]
Official Symbol	GSTA4
Synonyms	GSTA4; glutathione S-transferase alpha 4; glutathione S transferase A4; glutathione S-transferase A4; GST class-alpha member 4; glutathione transferase A4-4; glutathione S-transferase A4-4; glutathione S-aryltransferase A4; glutathione S-alkyltransferase A4; glutathione S-aralkyltransferase A4; S-(hydroxyalkyl)glutathione lyase A4; GTA4; GSTA4-4; DKFZp686D21185;
Gene ID	2941
mRNA Refseq	NM_001512
Protein Refseq	NP_001503

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MIM	605450
UniProt ID	O15217
Chromosome Location	6p12.2
Pathway	Biological oxidations, organism-specific biosystem; Drug metabolism - cytochrome P450, organism-specific biosystem; Drug metabolism - cytochrome P450, conserved biosystem; Glutathione conjugation, organism-specific biosystem; Glutathione metabolism, organism-specific biosystem; Glutathione metabolism, conserved biosystem; Metabolism, organism-specific biosystem;
Function	glutathione transferase activity; glutathione transferase activity; glutathione transferase activity; protein homodimerization activity; transferase activity;

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