

Recombinant Human GSTA3, GST-tagged

Cat. No. GSTA3-27543TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human GSTA3 with N terminal proprietary tag. Predicted MW 50.53 kDa.
Species	Human
Source	Wheat Germ
ProteinLength	222 amino acids
Description	Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. These enzymes are involved in cellular defense against toxic, carcinogenic, and pharmacologically active electrophilic compounds. At present, eight distinct classes of the soluble cytoplasmic mammalian glutathione S-transferases have been identified: alpha, kappa, mu, omega, pi, sigma, theta and zeta. This gene encodes a glutathione S-transferase belonging to the alpha class genes that are located in a cluster mapped to chromosome 6. Genes of the alpha class are highly related and encode enzymes with glutathione peroxidase activity. However, during evolution, this alpha class gene diverged accumulating mutations in the active site that resulted in differences in substrate specificity and catalytic activity. The enzyme encoded by this gene catalyzes the double bond isomerization of precursors for progesterone and testosterone during the biosynthesis of steroid hormones. An additional transcript variant has been identified, but its full length sequence has not been determined.

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Conjugation	GST
Molecular Weight	50.530kDa inclusive of tags
Form	Liquid
Purity	Proprietary Purification
Storage buffer	pH: 8.00 Constituents: 0.3% Glutathione, 0.79% Tris HCl
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequences of amino acids	MAGKPKLHYFNNGRGRMEPIRWLLAAAGVEFEEKFIGSAED LGKLRNDGSLMFQQV PMVEIDGIKLVQTRAILNYIASKYN LYGKDIKERALIDMYTEGMADLNEMILLPLCRP EEKDAK IALIKEKTKSRYFPAPFEKVLQSHGQDYL VG NKL SRADISL VELLYYVEELDS SLISNFPLLKALKTRISNLPTVKKFLQP GSPRKPPADAKALEEARKIFRF
Sequence Similarities	Belongs to the GST superfamily. Alpha family. Contains 1 GST C-terminal domain. Contains 1 GST N-terminal domain.

GENE INFORMATION

Gene Name	GSTA3 glutathione S-transferase alpha 3 [Homo sapiens]
Official Symbol	GSTA3
Synonyms	GSTA3; glutathione S-transferase alpha 3; glutathione S transferase A3; glutathione S-transferase A3;
Gene ID	2940

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mRNA Refseq	NM_000847
Protein Refseq	NP_000838
MIM	605449
Uniprot ID	Q16772
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;
Function	glutathione transferase activity; glutathione transferase activity; glutathione transferase activity; transferase activity;

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