

Bioactive

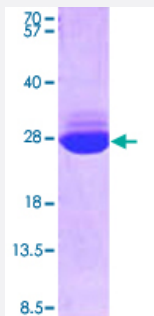
Full-Length

GSTA1 (Human) Recombinant Protein

Catalog # P3495

Size 100 ug

Applications



Specification

Product Description

Human GSTA1 (NP_665683, 1 a.a. - 222 a.a.) full-length recombinant protein expressed in *Escherichia coli*.

Sequence

MAEKPKLHYFNARGRMESTRWLLAAAGVEFEKFIKSAEDLDKLRNDGYLMFQQVPMVEIDGMK
LVQTRAILNYASKYNLYGKDIKERALIDMYEGIADLGEMILLPVCPPEEKDAKLALIKEKIKNRYFPA
FEKVLKSHGQDYL VGNKLSRADIHLVELLYVEELDSSLISFPLLKALKTRISNLPTVKKFLQPGS
PRKPPMDEKSLEEARKIFRF

Host

Escherichia coli

Theoretical MW (kDa)

25.6

Form

Liquid

Preparation Method

Escherichia coli expression system

Purification

Conventional Chromatography

Concentration

1 mg/mL

Purity

> 90% by SDS-PAGE

Activity

Specific activity is 5-8 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.

Quality Control Testing

Loading 3 ug protein in 15% SDS-PAGE

Storage Buffer

In 20 mM Tris-HCl buffer, pH 8.0 (1 mM DTT, 10% glycerol).

Storage Instruction

Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — GSTA1

Entrez GeneID

[2938](#)

Protein Accession#

[NP_665683](#)

Gene Name

GSTA1

Gene Alias

GST2, GSTA1-1, GTH1, MGC131939

Gene Description

glutathione S-transferase alpha 1

Omim ID

[138359](#)

Gene Ontology

[Hyperlink](#)

Gene Summary

Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. These enzymes function in the detoxification of electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins and products of oxidative stress, by conjugation with glutathione. The genes encoding these enzymes are known to be highly polymorphic. These genetic variations can change an individual's susceptibility to carcinogens and toxins as well as affect the toxicity and efficacy of some drugs. 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. The alpha class genes, located in a cluster mapped to chromosome 6, are the most abundantly expressed glutathione S-transferases in liver. In addition to metabolizing bilirubin and certain anti-cancer drugs in the liver, the alpha class of these enzymes exhibit glutathione peroxidase activity thereby protecting the cells from reactive oxygen species and the products of peroxidation. [provided by RefSeq]

Other Designations

GST, class alpha, 1|GST-epsilon|OTTHUMP00000016611|S-(hydroxyalkyl)glutathione lyase A1|glutathione S-alkyltransferase A1|glutathione S-aryltransferase A1|glutathione S-transferase 2|glutathione S-transferase A1|glutathione S-transferase Ha subunit 1

Pathway

- [Drug metabolism - cytochrome P450](#)
- [Glutathione metabolism](#)
- [Metabolism of xenobiotics by cytochrome P450](#)

Disease

- [Acute Disease](#)
- [Adenoma](#)
- [Adenomatous Polyposis Coli](#)
- [Alzheimer disease](#)
- [Amphetamine-Related Disorders](#)
- [Arsenic Poisoning](#)
- [Asthma](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Chromosome Aberrations](#)
- [Chromosome Deletion](#)
- [Cognition](#)
- [Colon cancer](#)
- [Colorectal Neoplasms](#)
- [Diabetes Mellitus](#)
- [DNA Damage](#)
- [Drug Toxicity](#)
- [Duodenal Neoplasms](#)

- [Genetic Predisposition to Disease](#)
- [Graft vs Host Disease](#)
- [Hemoglobinopathies](#)
- [Hepatic Veno-Occlusive Disease](#)
- [Hypertension](#)
- [Kidney Failure](#)
- [Leukemia](#)
- [Liver Diseases](#)
- [Liver Neoplasms](#)
- [Lung carcinoma](#)
- [Lung Neoplasms](#)
- [Mouth Neoplasms](#)
- [Myelodysplastic Syndromes](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Metastasis](#)
- [Neoplasms](#)
- [Neutropenia](#)
- [Ovarian cancer](#)
- [Ovarian Failure](#)
- [Ovarian Neoplasms](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Pulmonary Disease](#)
- [Recurrence](#)
- [Stomach Neoplasms](#)
- [Translocation](#)

- [Urinary Bladder Neoplasms](#)
- [Urologic Neoplasms](#)