

Glutathione S Transferase Alpha 1 (GSTa1) Active Protein | GSTa1 active protein

Active Glutathione S Transferase Alpha 1 (GSTa1)

CATALOG # AAA161754	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Glutathione S Transferase Alpha 1 (GSTa1); Active Glutathione S Transferase Alpha 1 (GSTa1); Glutathione S Transferase Alpha 1; GSTA1; GST2; GSTA1-1; GTH1; GST class-alpha member 1; GST HA subunit 1; GST-epsilon; Glutathione S-transferase A1; N-terminally processed4; GSTa1 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ala2~Phe22 2
Applicable Applications for GSTa1 active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	8.9
Research Area	Enzyme & Kinase, Tumor immunity, Hepatology
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

IMAGES

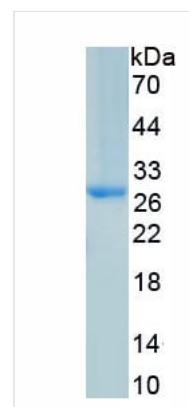
Specific Activity (pmol/min/ug)=

$$\frac{\text{Adjusted } V_{max}^* (\text{OD}/\text{min}) \times \text{well volume (L)} \times 10^{12} \text{ pmol/mol}}{\text{ext. coeff}^{**} (\text{M}^{-1}\text{cm}^{-1}) \times \text{path corr.}^{***} (\text{cm}) \times \text{amount of enzyme (ug)}}$$

*Adjusted for Substrate Blank
**Using the extinction coefficient 9600 M⁻¹cm⁻¹
***Using the path correction 0.32 cm

Bioactivity

GSTa1 (Glutathione S-transferase a1) is an enzyme that plays an important role in detoxification by catalyzing the conjugation of many hydrophobic and electrophilic compounds with reduced glutathione. This subfamily of enzymes has a particular role in protecting cells from Reactive Oxygen Species and the products of peroxidation. Polymorphisms in this gene influence the ability of individuals to metabolize different drugs. GSTa1 catalyze the endogenous glutathione conjugation 1-Chloro-2,4-dinitrobenzene (CDNB), which can increase in the absorbance at 340 nm. The reaction was performed in adding 10 ul 200 mM glutathione (reduced) and 10 ul 100 mM CDNB in 980 ul 100 mM NaH2PO4 (pH7.0), rapidly mixed. Then add 50 ul mixed substrates to 50 ul different concentrations of recombinant human GSTa1, mix gently. Incubated at 37 degree C for 5min, then read at a wavelength of 340 nm. The specific activity of recombinant human GSTa1 is >17000 pmol/min/ug.



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for GSTa1 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	22091454
NCBI GeneID	2938
NCBI Accession #	NP_665683.1
NCBI GenBank Nucleotide #	NM_145740.3
UniProt Accession #	P08263; Q14750; Q5GHF8; Q5SZC1
Molecular Weight	25,631 Da
NCBI Official Full Name	glutathione S-transferase A1
NCBI Official Synonym Full Names	glutathione S-transferase alpha 1
NCBI Official Symbol	GSTA1
NCBI Official Synonym Symbols	GST2; GTH1; GSTA1-1
NCBI Protein Information	glutathione S-transferase A1; GST-epsilon; GST HA subunit 1; GST, class alpha, 1; GST class-alpha member 1; glutathione S-transferase 2; glutathione S-aryltransferase A1; glutathione S-alkyltransferase A1; S-(hydroxyalkyl)glutathione lyase A1; glutathione
UniProt Protein Name	Glutathione S-transferase A1
UniProt Gene Name	GSTA1
UniProt Entry Name	GSTA1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/glutathione-s-transferase-alpha-1-gsta1/161754>