

GSTA1 Protein, Human (HEK293, C-His)

Cat. No.:	HY-P75153A
Synonyms:	Glutathione S-transferase A1; GST-epsilon; GSTA1-1; GTH1; GSTA1
Species:	Human
Source:	HEK293
Accession:	P08263 (M1-F222)
Gene ID:	2938
Molecular Weight:	Approximately 26 kDa

PROPERTIES

AA Sequence	<pre> MAEKPKLHYF NARGRMESTR WLLAAAGVEF EEKFIKSAED LDKLRNDGYL MFQQVPMVEI DGMKLVQTRA ILNYIASKYN LYGKDIKERA LIDMYIEGIA DLGEMILLLP VCPPEEKDAK LALIKEKIKN RYFPAFEKVL KSHGQDYLVG NKLSRADIHL VELLYYVEEL DSSLISSFPL LKALKTRISN LPTVKKFLQP GSPRKPPMDE KSLEEARKIF RF </pre>
Biological Activity	Specific activity is 4206.22 pmol/min/μg, and is defined as the amount of enzyme that conjugate 1 pmole of 1-chloro-2,4-dinitrobenzene (CDNB) with reduced glutathione per minute at pH 6.5 at 25°C.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The GSTA1 Protein serves as a glutathione S-transferase, catalyzing the nucleophilic attack of the sulfur atom of glutathione on the electrophilic groups of a broad spectrum of both exogenous and endogenous compounds (Probable). This enzymatic activity includes the formation of glutathione conjugates for prostaglandin A2 (PGA2) and prostaglandin J2 (PGJ2).
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Additionally, GSTA1 plays a role in hormone biosynthesis by catalyzing the isomerization of D5-androstene-3,17-dione (AD) into D4-androstene-3,17-dione. Notably, its glutathione-dependent peroxidase activity extends to the metabolism of oxidized linoleic acid, specifically targeting the fatty acid hydroperoxide (13S)-hydroperoxy-(9Z,11E)-octadecadienoate/13-HPODE. The diverse enzymatic functions of GSTA1 underscore its involvement in crucial cellular processes, from detoxification reactions to hormone biosynthesis and the metabolism of oxidized lipids.

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

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