Active Glutathione S Transferase Alpha 1 (GSTa1)

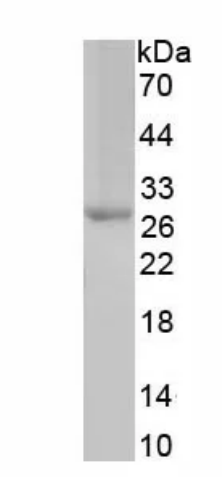
Catalog#:PEH12442

概述（Summary）

别称（Alternative Names）	GSTA1; GST2; GSTA1-1; GTH1; GST class-alpha member 1; GST HA subunit 1; GST-epsilon; Glutathione S-transferase A1, N-terminally processed
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Ala2-Phe222】
Accession #	P08263
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	26.7 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Glutathione S-transferase that catalyzes the nucleophilic attack of the sulfur atom of glutathione on the electrophilic groups of a wide range of exogenous and endogenous compounds (Probable). Involved in the formation of glutathione conjugates of both prostaglandin A2 (PGA2) and prostaglandin J2 (PGJ2). It also catalyzes the isomerization of D5-androstene-3,17-dione (AD) into D4-androstene-3,17-dione and may therefore play an important role in hormone biosynthesis. Through its glutathione-dependent peroxidase activity toward the fatty acid hydroperoxide (13S)-hydroperoxy-(9Z,11E)-octadecadienoate/13-

HPODE it is also involved in the metabolism of oxidized linoleic acid.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

Specific Activity (pmol/min/ug)=

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

*Adjusted for Substrate Blank
**Using the extinction coefficient 9600 $M^{-1}cm^{-1}$
***Using the path correction 0.32 cm

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 µl 200 mM glutathione (reduced) and 10 µl 100 mM CDNB in 980 µl 100 mM NaH2PO4 (pH7.0), rapidly mixed. Then add 50 µl mixed substrates to 50 µl different concentrations of recombinant human GSTa1, mix gentliy. Incubated at 37℃ for 5min, then read at a wavelength of 340 nm. The specific activity of recombinant human GSTa1 is >17000 pmol/min/µg.

注意事项（Note）

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