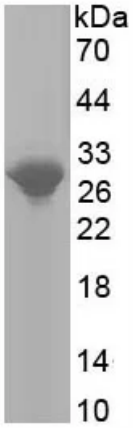
Active Glutathione S Transferase Alpha 3 (GSTa3)

Catalog#:PER12467

概述（Summary）

别称（Alternative Names）	GST-A3; GSTA3-3; GTA3; GST class-alpha member 3
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Met1-Ser221】
Accession #	P04904
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	26.6 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）	Conjugation of reduced glutathione to a wide number of exogenous and endogenous hydrophobic electrophiles. Catalyzes isomerization reactions that contribute to the biosynthesis of steroid hormones. Efficiently catalyze obligatory double-bond isomerizations of delta(5)-androstene-3,17-dione and delta(5)-pregnene-3,20-dione, precursors to testosterone and progesterone, respectively. Has substantial activity toward aflatoxin B1-8,9-epoxide.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

Specific Activity (pmol/min/ug)=

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

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

GSTa3 (Glutathione S-transferase a3) 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. GSTa3 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 rat GSTa3, mix gently. Incubated at 37℃ for 5min, then read at a wavelength of 340 nm. The specific activity of recombinant rat GSTa3 is >37000 pmol/min/µg.

注意事项（Note）

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