APB090Ha01 100μg
Active Glutathione S Transferase Pi (GSTp)
Organism Species: *Hamster (Chinese hamster)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Met1~Gln210
Tags: N-terminal His-tag
Purity: >90%
Traits: Freeze-dried powder
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 7.9
Predicted Molecular Mass: 27.3kDa
Accurate Molecular Mass: 27kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

MPPYTIVYFP VRGRCEAMRI LLADQGQSWK EEVVTVETWR KGSLKSTCLY
GQLPKFEDGD LTLYQSNAIL RHLGRSLGLY GKDQREAALV DMVNDGVEDL
RCKYITLIYT KYEEGKDDYV KALPGHLKPF ETLLSQNQGG KAFIVGDQIS
FVDYNLLDLL LIHQVLAPGC LDNFPLLSAY VARLSARPKI KAFLSSPDHV
NRPINGNGKQ

[ACTIVITY]

GSTp (Glutathione S-transferase P) is an enzyme that plays an important role in detoxification by catalyzing the conjugation of many hydrophobic and electrophilic compounds with reduced glutathione. GSTP1 is identified as a CDK5 (Cyclin dependent kinase-5) regulatory protein, and is thought to regulates negatively CDK5 activity via p25/p35 translocation. GSTP1 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 chinese hamster GSTP1, mix gentliy. Incubated at 37℃ for 5min, then read at a wavelength of 340 nm. The specific activity of recombinant chinese hamster GSTp1 is >6500 pmol/min/µg.

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

[IDENTIFICATION]

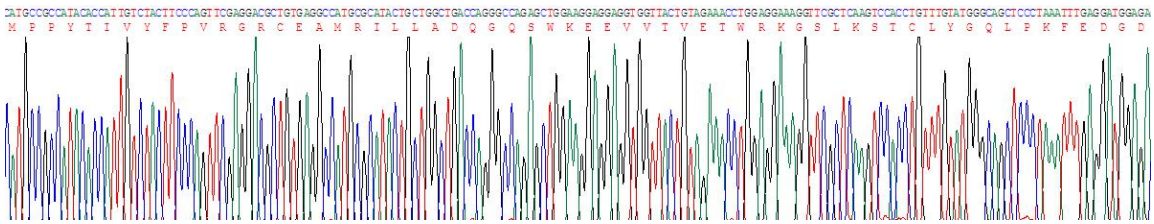

Figure 1. Gene Sequencing (extract)

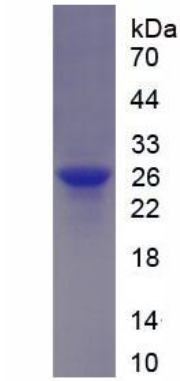

Figure 2. SDS-PAGE

Sample: Active recombinant GSTp, Chinese hamster

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.