

APB090Ra01 100µg
Active Glutathione S Transferase Pi (GSTp)
Organism Species: *Rattus norvegicus (Rat)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Met1~Gln210

Tags: N-terminal His-tag

Purity: >98%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 7.1

Predicted Molecular Mass: 24.7kDa

Accurate Molecular Mass: 27kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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 VRGRCEATRM LLADQGQSWK EEVVTIDVWL QGSLKSTCLY
 QQLPKFEDGD LTLYQSNAIL RHLGRSLGLY GKDQKEAALV DMVNDGVEDL
 RCKYGTLIYT NYENGGDDYV KALPGHLKPF ETLLSQNQGG KAFIVGNQIS
 FADYNLLDLL LVHQVLAPGC LDNFPLLSAY VARLSARPKI KAFLSSPDHL
 NRPINGNGKQ

[ACTIVITY]

Glutathione S-transferase P (GSTP1) is a member of Glutathione S-transferases (GSTs) family which play an important role in detoxification by catalyzing the conjugation of many hydrophobic and electrophilic compounds with reduced glutathione. GSTP1 catalyze the endogenous glutathione conjugation 1-Chloro-2,4-dinitrobenzene (CDNB), which can increase in the absorbance at 340nm. The reaction was performed in adding 10µL 200mM glutathione (reduced) and 10µL 100mM CDNB in 980µL 100mM NaH₂PO₄ (pH7.0), rapidly mixed. Then add 50µL mixed substrates to 50µL recombinant rat GSTP1, mix gently, read the absorbance at 340nm for 5min. One unit activity was defined as 1 µmole of CDNB conjugate per minute per 1 mg GSTP1.

Calculation

$$\text{GSTP1 specific activity} = \frac{\Delta OD_{340}/\text{min}}{\epsilon_{mM} / \text{amount of protein}}$$

$$\text{Where: } \Delta OD_{340}/\text{min} = \frac{A_{340}(\text{final read}) - A_{340}(\text{initial read})}{\text{reaction time}(\text{min})}$$

ϵ mM = 9.6

The specific activity of recombinant rat GSTP1 is 4.025U/mg.

[IDENTIFICATION]

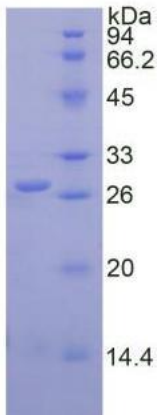


Figure 2. SDS-PAGE

Sample: Active recombinant GSTp, Rat

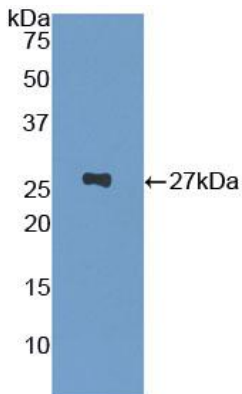


Figure 3. Western Blot

Sample: Recombinant GSTp, Rat;

Antibody: Rabbit Anti-Rat GSTp Ab (PAB090Ra01)

[IMPORTANT NOTE]

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