ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Glutathione Transferase (GST) Protein Antibodies

Ì **Cat.** GST16-M	Mouse monoclonal Anti-GST (E. coli) protein IgG #2	**SIZE**: 100 ug
Ì **Cat.** GST16-BTN	Mouse monoclonal Anti-GST IgG-Biotinylated	**SIZE**: 50 ug
Ì **Cat.** GST12-C	Recombinant purified GST (E. coli) protein WB +ve control	**SIZE**: 100 ul

Expression of genes in E. coli or yeast or baculovirus offers a convenient system to produce large amounts of recombinant proteins that may otherwise be difficult to isolate from natural cells and tissues. Very often antibodies to these newly identified proteins are not available to study its biochemical properties, monitor protein expression, and purification. In order to circumvent this problem, short pieces of well-defined peptides (Poly-His, Flag-epitope or c-myc epitope or HA-tag) or small proteins (bacterial GST, MBP, Thioredoxin, b-Galactosidase, VSV-Glycoprotein etc) are often cloned along with the target gene. Proteins are expressed as fusion proteins. Antibodies to these fusion-tags are already available to monitor fusion protein expression and purification. Therefore, fusion-tags serve as universal tags much like secondary antibodies. Many tags have their own characteristics. Poly-His-fusion proteins (6 x His) can bind to Nickel-Sepharose or Nickel-HRP. GST-fusion proteins can bind to glutathione-Sepharose. Therefore, a high degree of purification of fusion protein can be achieved in just one affinity purification step. Purity of fusion proteins can be followed by Tag-antibodies. Very often, fusion proteins are directly injected into animals to generate antibodies. Some fusion tags can be removed later by treatment with enzymes to generate tag-free recombinant proteins.

Source of Antigen and Antibodies

Antigen	Bacterial GST (Schistosoma japonicum, ~27 kda) was expressed in E. coli and purified (>97%).
Ab Host/type	Mouse, monoclonal, IgG1, purified, supplied in PBS, 0.1% BSA (**Cat #GST16-M**)
2-Ab	**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Cat# GST16-BTN, Biotin-conjugate

Purified anti-GST IgG (GST16-M) was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC**)** at F/P ratio ~10-20:1. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** (50 ug) or **liquid** form. Reconstitute powder in PBS to prepare stock solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:5,000-1:30,000 ELISA, 1:2K-1:10K for western.

Bacterail GST protein (27 kda) for WB +ve control, Cat # GST12-C, is formulated in SDS-PAGE sample buffer (reduced). This preparation is biologically **inactive**. For Western blot +ve control (**Cat # GST12-C**) is supplied in SDS-PAGE sample buffer (reduced). This preparation is biologically **inactive**.

For Western blots, load 10 ul/lane of **GST12**-C for good visibility with antibody Cat # **GST11**-S or GST12-M or GST16-M. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **GST12**-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

☐ 100 ug/100ul ☐ solution ☐ lyophilized powder

Supplied in **Buffer**: PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

The antibodies have been tested by ELISA (suggested dilution 1K-10K) using 50-100 ng/well GST-coated ELISA plates. They recognize both native GST or GST fusion proteins in Western blots (suggested dilution 1K). Antibody dilutions will vary depending upon the type of technique used to detect primary antibody such calorimetric or chemiluminescence substrates. The nature and concentration of GST or GST fusion proteins may also affect antibody concentration.

This product is for in vitro research use only.

Related material available from ADI

Purified GST, Monoclonal anti-GST, Polyclonal Rabbit and Goat GST antibodies

GST Coated ELISA plates; Anti-Rabbit HRP conjugates, **GST or GST fusion protein ELISA kit**

GST16-M, GST16-BTN, GST12-C 150729A

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