

Product No. G 1160
Lot 087H4806

Monoclonal Anti-Glutathione-S-Transferase (GST)
Mouse Ascites Fluid
Clone GST-2

Monoclonal Anti-Glutathione-S-Transferase (GST) (mouse IgG2b isotype) is derived from the GST-2 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from immunized BALB/c mice. Purified recombinant GST fusion protein was used as the immunogen. The isotype is determined using Sigma ImmunoType[™] Kit (Sigma ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2). The product is provided as ascites fluid with 0.1% sodium azide (see MSDS)* as a preservative.

Specificity

Monoclonal Anti-Glutathione-S-Transferase (GST) recognizes native and denatured-reduced forms of purified GST or GST fusion proteins in immunoblotting, dot blot and ELISA. The antibody is specific for GST from *Schistosoma japonicum*, and does not recognize GST from rat, rabbit, porcine or bovine liver, or from human placenta when tested by ELISA.

Description

Recombinant DNA technology enables the insertion of genes of interest to specific sequences or genes, which can provide 'affinity handles' designed to bind specific matrices. The use of these tags enables the selective identification and purification of the protein of interest.^{1,2} Problems encountered when using many of the affinity tags include the incorrect folding of recombinant molecules masking the ligand active site, and the need cleave off the fusion protein and repurify the parent protein. An improved purification process has been developed by genetically engineering sequences of tails or tags away from the protein active site, by insertion at the N- or C-terminus. It has been reported that the addition of a glutathione-S-transferase (GST) tag creates a stable fusion product that does not appear to interfere with the bioactivity of the protein or with the biodistribution of the GST tagged product.^{3,4} Such

protein can be purified by immobilized glutathione affinity chromatography.³ Many recombinant proteins have been engineered with GST tags to facilitate the detection, isolation and purification of these proteins.⁵ Monoclonal antibody reacting specifically with GST may be useful in various immunotechniques, to identify the expression of a GST fusion protein in bacteria, bacterial lysates or cells and tissues transfected with a GST fusion protein expressing vectors.

Uses

Monoclonal Anti-Glutathione-S-Transferase (GST) may be used for the detection of GST using various immunochemical assays including ELISA, immunoblot and dot blot.

Titer: 1:1,000

The antibody titer was determined by indirect immunoblotting using purified recombinant GST or lysate of induced bacteria expressing GST.

In order to obtain best results, it is recommended that each user determine the optimal working dilution for individual applications by titration assay.

Storage

For continuous use, store at 2-8°C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

*Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

References

1. Narayanan, S., J. Chromatogr., **658**, 237 (1994).
2. Smith, D., and Johnson, K., Gene, **67**, 31 (1988).
3. Smith, D., et al., Proc. Natl. Acad. Sci. USA, **83**, 8703 (1986).
4. Cartwright, G., et al., J. Immunol. Meth., **179**, 31 (1995).
5. Hibma, M., et al., Nucl. Ac. Res., **22**, 3806 (1994).

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