SANTA CRUZ BIOTECHNOLOGY, INC.

GST (S-tag-05): sc-66167

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Plasmid vectors for the expression of coding regions of eukaryotic genes in *E. coli* are in common usage; such expression vectors often encode hybrid fusion proteins containing part prokaryotic and part eukaryotic specified proteins. For instance, the pGEX.3X expression vector developed by Smith and Johnson allows for synthesis of fusion proteins between glutathione-S-transferase (GST) and proteins encoded by inserted cDNA sequences. Antibodies derived from these GST fusion proteins are useful for checking protein expression both in plaques and on Western blots as well as for immunoaffinity purification of proteins expressed in *E. coli*.

REFERENCES

1. Maniatis, T., et al. 1982. Molecular Cloning. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory.
2. Smith, D.B. and Johnson, K.S. 1988. Single-step purification of polypeptides expressed in *Escherichia coli* as fusions with glutathione S-transferase. Gene 67: 31-40.
3. Crabb, B.S. and Studdert, M.J. 1995. Expression of small regions of equine herpesvirus 1 glycoprotein C in *Escherichia coli*. Vet. Microbiol. 46: 181-191.
4. Soler, D., et al. 1995. Matrilysin: expression, purification and characterization. J. Protein Chem. 14: 511-520.
5. Yu, L., et al. 1995. Cloning, gene sequencing and expression of the small molecular mass ubiquinone-binding protein of mitochondrial biquinol-cytochrome c reductase. J. Biol. Chem. 270: 25634-25638.
6. Driscoll, J., et al. 1995. Functional comparison of native and recombinant human salivary histatin 1. J. Dent. Res. 74: 1837-1844.
7. Chen, Y.R., et al. 1996. Functional expression of subunit IV of *Rhodobacter sphaeroides* cytochrome b-c_1 complex and reconstitution of recombinant protein with three-subunit core complex. J. Biol. Chem. 271: 2057-2062.
8. Xu, J., et al. 1996. Assessment of antigenicity and genetic variation of glycoprotein B of murine cytomegalovirus. J. Gen. Virol. 77: 49-59.
9. Murthy, T.V. 2004. Expression of GST-fused kinase domain of human Csk homologous kinase from *Pichia pastoris* facilitates easy purification. Biotechnol. Lett. 26: 443-449.

SOURCE

GST (S-tag-05) is a mouse monoclonal antibody raised against GST fusion protein of *Schistosoma japonicum* origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

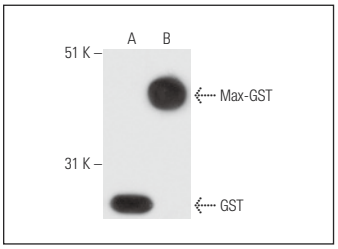
Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GST (S-tag-05) is recommended for detection of GST fusion proteins and glutathione-S-transferase (GST) by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Molecular Weight of GST: 26 kDa.

DATA



GST (S-tag-05): sc-66167. Western blot analysis of recombinant GST protein (**A**) and GST-tagged Max fusion protein (**B**).

SELECT PRODUCT CITATIONS

1. Crupi, M.J., et al. 2015. Distinct temporal regulation of RET isoform internalization: roles of clathrin and AP2. Traffic 16: 1155-1173.
2. Bartley, C.M., et al. 2016. Mammalian FMRP S499 is phosphorylated by CK2 and promotes secondary phosphorylation of FMRP. eNeuro 3: ENEURO.0092-16.2016.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **GST (B-14): sc-138** for GST antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.