SANTA CRUZ BIOTECHNOLOGY, INC.

GST (1E5): sc-53909

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.

SOURCE

GST (1E5) is a mouse monoclonal antibody raised against recombinant Glutathione S-transferase.

PRODUCT

Each vial contains 50 µg IgG_{2b} in 500 µl of PBS with < 0.1% sodium azide, 1% glycerol and 0.1% gelatin.

APPLICATIONS

GST (1E5) is recommended for detection of 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.

STORAGE

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

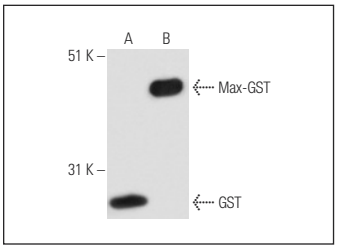
PROTOCOLS

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

RESEARCH USE

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

DATA



GST (1E5): sc-53909. Western blot analysis of recombinant GST protein (**A**) and GST-tagged Max fusion protein (**B**).

SELECT PRODUCT CITATIONS

1. Meng, D., et al. 2009. MEK1 binds directly to β-Arrestin-1, influencing both its phosphorylation by ERK and the timing of its isoprenaline-stimulated internalization. J. Biol. Chem. 284: 11425-11435.
2. Lehman, J.A., et al. 2011. Induction of apoptotic genes by a p73-phosphatase and tensin homolog (p73-PTEN) protein complex in response to genotoxic stress. J. Biol. Chem. 286: 36631-36640.
3. Ramakrishna, S., et al. 2012. Hyaluronan binding motifs of USP17 and SDS3 exhibit anti-tumor activity. PLoS ONE 7: e37772.
4. Alana, L., et al. 2014. Prostate tumor overexpressed-1 (PTOV1) down-regulates HES1 and HEY1 notch targets genes and promotes prostate cancer progression. Mol. Cancer 13: 74.
5. Joo, H.Y., et al. 2015. SIRT1 deacetylates and stabilizes hypoxia-inducible factor-1α (HIF-1α) via direct interactions during hypoxia. Biochem. Biophys. Res. Commun. 462: 294-300.
6. Jiang, S.Y., et al. 2016. Improving protein content and quality by over-expressing artificially synthetic fusion proteins with high lysine and threonine constituent in rice plants. Sci. Rep. 6: 34427.
7. Ghosh, K., et al. 2018. Positive regulation of transcription by human ZMYND8 through its association with P-TEFb complex. Cell Rep. 24: 2141-2154.e6.
8. Wang, J., et al. 2019. HBx regulates transcription factor PAX8 stabilization to promote the progression of hepatocellular carcinoma. Oncogene 38: 6696-6710.
9. Zhao, X., et al. 2020. Long noncoding RNA NHEG1 drives β-catenin transactivation and neuroblastoma progression through interacting with DDX5. Mol. Ther. 28: 946-962.

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.