SANTA CRUZ BIOTECHNOLOGY, INC.

GBP2 (M-15): sc-10588

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Guanylate-binding proteins GBP1 and GBP2 are GTP-binding proteins with a high-turnover GTPase activity and an antiviral effect. GBP1 mediates an antiviral effect against vesicular stomatitis virus and encephalomyocarditis virus and plays a role in the IFN-mediated antiviral response against these viruses. GBP1 and GBP2 belong to a group of large GTP-binding proteins with a high concentration-dependent GTPase activity that have the common ability to undergo oligomerization. GBP1 and GBP2 are bone marrow-derived GTPases encoded by interferon-activated genes and are inducible following IFN treatment. Specifically, GBP1 is expressed in cultured mammary epithelial tumor cell lines after treatment with IFN-γ and LPS.

REFERENCES

1. Praefcke, G.J., Geyer, M., Schwemmle, M., Robert Kalbitzer, H. and Herrmann, C. 1999. Nucleotide-binding characteristics of human guanylate-binding protein 1 (hGBP1) and identification of the third GTP-binding motif. J. Mol. Biol. 292: 321-332.
2. Anderson, S.L., Carton, J.M., Zhang, X. and Rubin, B.Y. 1999. Genomic organization and chromosomal localization of a new member of the murine interferon-induced guanylate-binding protein family. J. Interferon Cytokine Res. 19: 487-494.
3. Anderson, S.L., Carton, J.M., Lou, J., Xing, L. and Rubin, B.Y. 1999. Interferon-induced guanylate binding protein-1 (GBP-1) mediates an antiviral effect against vesicular stomatitis virus and encephalomyocarditis virus. Virology 256: 8-14.
4. Sun, H., Jackson, M.J., Kundu, N. and Fulton, A.M. 1999. Interleukin-10 gene transfer activates interferon-γ and the IFN-γ-inducible genes Gbp-1/Mag-1 and Mig-1 in mammary tumors. Int. J. Cancer 80: 624-629.

CHROMOSOMAL LOCATION

Genetic locus: Gbp2 (mouse) mapping to 3 H1.

SOURCE

GBP2 (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GBP2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10588 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

PROTOCOLS

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

STORAGE

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

APPLICATIONS

GBP2 (M-15) is recommended for detection of GBP2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GBP2 siRNA (m): sc-41708, GBP2 shRNA Plasmid (m): sc-41708-SH and GBP2 shRNA (m) Lentiviral Particles: sc-41708-V.

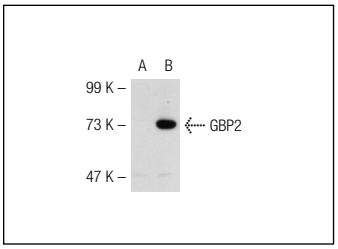
Molecular Weight of GBP2: 67 kDa.

Positive Controls: GBP2 (m): 293T Lysate: sc-120431.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GBP2 (M-15): sc-10588. Western blot analysis of GBP2 expression in non-transfected: sc-117752 (**A**) and mouse GBP2 transfected: sc-120431 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yamamoto, M., Okuyama, M., Ma, J.S.,, Kimura, T., Kamiyama, N., Saiga, H., Ohshima, J., Sasai, M., Kayama, H., Okamoto, T., Huang, D.C., Soldati-Favre, D., Horie, K., Takeda, J. and Takeda, K. 2012. A cluster of interferon-γ-inducible p65 GTPases plays a critical role in host defense against *Toxoplasma gondii*. Immunity 37: 302-313.

RESEARCH USE

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