SANTA CRUZ BIOTECHNOLOGY, INC.

GBP4 (M-17): sc-242893

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GBP4 (guanylate binding protein 4), also known as Mpa2, is a 640 amino acid protein that localizes to the cytoplasm and belongs to the guanylate binding protein (GBP) family. Like other GBP proteins, GBP4 contains a conserved N-terminal GTP-binding domain and functions to bind and hydrolyze GTP, GDP and GMP, possibly playing a role in erythroid differentiation. The gene encoding GBP4 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

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2. Weise, A., Starke, H., Mrasek, K., Claussen, U. and Liehr, T. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
3. Vestal, D.J. 2005. The guanylate-binding proteins (GBPs): proinflammatory cytokine-induced members of the dynamin superfamily with unique GTPase activity. J. Interferon Cytokine Res. 25: 435-443.
4. Marzin, Y., Jamet, D., Douet-Guilbert, N., Morel, F., Le Bris, M.J., Morice, P., Abgrall, J.F., Berthou, C. and De Braekeleer, M. 2006. Chromosome 1 abnormalities in multiple myeloma. Anticancer Res. 26: 953-959.
5. Olszewski, M.A., Gray, J. and Vestal, D.J. 2006. In silico genomic analysis of the human and murine guanylate-binding protein (GBP) gene clusters. J. Interferon Cytokine Res. 26: 328-352.

CHROMOSOMAL LOCATION

Genetic locus: Gbp3 (mouse) mapping to 3 H1.

SOURCE

GBP4 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GBP4 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-242893 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GBP4 (M-17) is recommended for detection of GBP4 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); non cross-reactive with other GBP family members.

Suitable for use as control antibody for GBP4 siRNA (m): sc-155898, GBP4 shRNA Plasmid (m): sc-155898-SH and GBP4 shRNA (m) Lentiviral Particles: sc-155898-V.

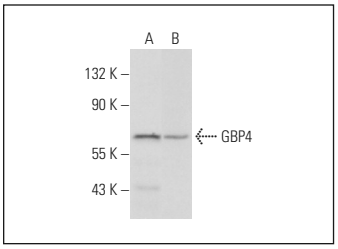
Molecular Weight of GBP4: 71 kDa.

Positive Controls: rat liver extract: sc-2395 or c4 whole cell lysate: sc-364186.

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



GBP4 (M-17): sc-242893. Western blot analysis of GBP4 expression in rat liver tissue extract (**A**) and c4 whole cell lysate (**B**).

RESEARCH USE

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