

GBP5 (G-12): sc-160355

BACKGROUND

GBP5 (guanylate binding protein 5), also known as GBP-TA antigen, is a 586 amino acid protein that localizes to the cytoplasmic side of the cell membrane. Belonging to the interferon (IFN)-inducible guanylate-binding protein (GBP) family, GBP5 may be involved in the inflammatory response or with cell proliferation and is suggested to have possible cancer-related functions. The gene encoding GBP5 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

1. Strehlow, I., et al. 1994. The interferon-inducible GBP1 gene: structure and mapping to human chromosome 1. *Gene* 144: 295-299.
2. Han, B.H., et al. 1998. Cloning, expression, and characterization of a novel guanylate-binding protein, GBP3 in murine erythroid progenitor cells. *Biochim. Biophys. Acta* 1384: 373-386.
3. Nguyen, T.T., et al. 2002. Murine GBP5, a new member of the murine guanylate-binding protein family, is coordinately regulated with other GBPs *in vivo* and *in vitro*. *J. Interferon Cytokine Res.* 22: 899-909.
4. Fellenberg, F., et al. 2004. GBP5 splicing variants: New guanylate-binding proteins with tumor-associated expression and antigenicity. *J. Invest. Dermatol.* 122: 1510-1517.
5. Olszewski, M.A., et al. 2006. *In silico* genomic analysis of the human and murine guanylate-binding protein (GBP) gene clusters. *J. Interferon Cytokine Res.* 26: 328-352.
6. Saban, M.R., et al. 2007. Repeated BCG treatment of mouse bladder selectively stimulates small GTPases and HLA antigens and inhibits single-spanning uroplakins. *BMC Cancer* 7: 204.
7. Kitaya, K., et al. 2007. Genes regulated by interferon- γ in human uterine microvascular endothelial cells. *Int. J. Mol. Med.* 20: 689-697.
8. Rupper, A.C. and Cardelli, J.A. 2008. Induction of guanylate binding protein 5 by γ interferon increases susceptibility to *Salmonella enterica* serovar Typhimurium-induced pyroptosis in RAW 264.7 cells. *Infect. Immun.* 76: 2304-2315.
9. Ito, Y., et al. 2008. Oligonucleotide microarray analysis of gene expression profiles followed by real-time reverse-transcriptase polymerase chain reaction assay in chronic active Epstein-Barr virus infection. *J. Infect. Dis.* 197: 663-666.

CHROMOSOMAL LOCATION

Genetic locus: Gbp5 (mouse) mapping to 3 H1.

SOURCE

GBP5 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GBP5 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-160355 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GBP5 (G-12) is recommended for detection of GBP5 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 GBP5 siRNA (m): sc-145352, GBP5 shRNA Plasmid (m): sc-145352-SH and GBP5 shRNA (m) Lentiviral Particles: sc-145352-V.

Molecular Weight of GBP5: 67 kDa.

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) 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



Try **GBP1-5 (G-12): sc-166960**, our highly recommended monoclonal alternative to GBP5 (G-12).