

# GBP1/2 (T-19): sc-10584

## 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- $\gamma$  and LPS.

## REFERENCES

1. Anderson, S.L., et al. 1999. Interferon-induced guanylate binding protein 1 (GBP1) mediates an antiviral effect against vesicular stomatitis virus and encephalomyocarditis virus. *Virology* 256: 8-14.
2. Anderson, S.L., et al. 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. Praefcke, G.J., et al. 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.
4. Prakash, B., et al. 2000. Structure of human GBP1 representing a unique class of GTP-binding proteins. *Nature* 403: 567-571.
5. Guenzi, E., et al. 2001. The helical domain of GBP1 mediates the inhibition of endothelial cell proliferation by inflammatory cytokines. *EMBO J.* 20: 5568-5577.
6. Lubeseder-Martellato, et al. 2002. GBP1 expression is selectively induced by inflammatory cytokines and is an activation marker of endothelial cells during inflammatory diseases. *Am. J. Pathol.* 161: 1749-1759.

## CHROMOSOMAL LOCATION

Genetic locus: Gbp1/Gbp2 (mouse) mapping to 3 H1.

## SOURCE

GBP1/2 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GBP1 of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-10584 P, (100  $\mu$ g 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

GBP1/2 (T-19) is recommended for detection of GBP1 and GBP2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

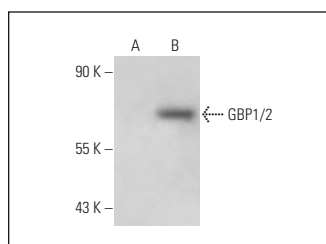
Molecular Weight of GBP1/2: 67 kDa.

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



GBP1/2 (T-19): sc-10584. Western blot analysis of GBP1/2 expression in non-transfected: sc-117752 (A) and mouse GBP2 transfected: sc-120431 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.