

GBF1 (N-20): sc-27938



The Power to Question

BACKGROUND

Protein trafficking to the membrane requires formation of coated carrier vesicles, such as COPI-coated vesicles from the *cis*-Golgi, a process triggered by membrane binding of the GTP-bound form of ADP-ribosylation factors. Normally, Brefeldin A (BFA) blocks this action by inhibiting guanine nucleotide exchange factors (GEFs) for ADP-ribosylation factor. However, GBF1, a member of the Sec7-domain family of GEFs, allows cells to maintain normal Golgi morphology and grow in the presence of BFA. The gene encoding the human GBF1 protein maps to chromosome 10q24.32, with the Sec7-domain centrally positioned, and a proline-rich C-terminus. Based on mutagenesis analysis, this proline rich region appears to interact with p115 in a functionally significant manner.

REFERENCES

1. Mansour, S.J., et al. 1998. Human GBF1 is a ubiquitously expressed gene of the Sec7 domain family mapping to 10q24. *Genomics* 54: 323-327.
2. Claude, A., et al. 1999. GBF1: a novel Golgi-associated BFA-resistant guanine nucleotide exchange factor that displays specificity for ADP-ribosylation factor 5. *J. Cell Biol.* 146: 71-84.
3. Kawamoto, K., et al. 2002. GBF1, a guanine nucleotide exchange factor for ADP-ribosylation factors, is localized to the *cis*-Golgi and involved in membrane association of the COPI coat. *Traffic* 3: 483-495.
4. Garcia-Mata, R, et al. 2003. The membrane-tethering protein p115 interacts with GBF1, an ARF guanine-nucleotide-exchange factor. *EMBO Rep.* 4: 320-325.
5. Garcia-Mata, R., et al. 2003. ADP-ribosylation factor/COPI-dependent events at the endoplasmic reticulum-Golgi interface are regulated by the guanine nucleotide exchange factor GBF1. *Mol. Biol. Cell* 14: 2250-2261.
6. Niu, T.K., et al. 2005. Dynamics of GBF1, a Brefeldin A-sensitive Arf1 exchange factor at the Golgi. *Mol. Biol. Cell* 16: 1213-1222.

CHROMOSOMAL LOCATION

Genetic locus: GBF1 (human) mapping to 10q24.32; Gbf1 (mouse) mapping to 19 C3.

SOURCE

GBF1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GBF1 of human 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-27938 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

GBF1 (N-20) is recommended for detection of GBF1 of mouse, rat and human 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).

GBF1 (N-20) is also recommended for detection of GBF1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GBF1 siRNA (h): sc-105388, GBF1 siRNA (m): sc-145349, GBF1 shRNA Plasmid (h): sc-105388-SH, GBF1 shRNA Plasmid (m): sc-145349-SH, GBF1 shRNA (h) Lentiviral Particles: sc-105388-V and GBF1 shRNA (m) Lentiviral Particles: sc-145349-V.

Molecular Weight of GBF1: 206 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.

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 **GBF1 (25): sc-136240**, our highly recommended monoclonal alternative to GBF1 (N-20).