

# Giantin (N-18): sc-46993

## BACKGROUND

GM130, a *cis*-Golgi matrix protein, interacts specifically with p115 and provides a membrane docking site. Both GM130 and p115 are involved in vesicle tethering to Golgi membranes. The protein p115 also binds p400, alternatively called Giantin. Giantin, the majority of whose mass projects into the cytoplasm, is involved in the docking of COPI vesicles via p115 to the Golgi membrane. Giantin, which also is known as macrogolgin or Golgi complex-associated protein, is involved in cross-bridge formation in the Golgi complex. Giantin, which can form a homodimer, is a single-pass type I membrane protein that is an antigen in Sjogren syndrome and in chronic rheumatoid arthritis.

## REFERENCES

1. Sohda, M., et al. 1994. Molecular cloning and sequence analysis of a human 372-kDa protein localized in the Golgi complex. *Biochem. Biophys. Res. Commun.* 205: 1399-1408.
2. Seelig, H.P., et al. 1994. Molecular genetic analyses of a 376-kilodalton Golgi complex membrane protein (giantin). *Mol. Cell. Biol.* 14: 2564-2576.
3. Stinton, L.M., et al. 2004. Autoantibodies to protein transport and messenger RNA processing pathways: endosomes, lysosomes, Golgi complex, proteasomes, assemblyosomes, exosomes and GW bodies. *Clin. Immunol.* 110: 30-44.
4. Ungewickell, A., et al. 2004. The inositol polyphosphate 5-phosphatase Ocl1 associates with endosomes that are partially coated with clathrin. *Proc. Natl. Acad. Sci. USA* 101: 13501-13506.
5. Sahashi, K., et al. 2004. Progressive myopathy with circulating autoantibody against giantin in the Golgi apparatus. *Neurology* 62: 1891-1893.
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## CHROMOSOMAL LOCATION

Genetic locus: GOLGB1 (human) mapping to 3q13.33; Golgb1 (mouse) mapping to 16 B3.

## SOURCE

Giantin (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Giantin 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-46993 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.

## RESEARCH USE

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

## APPLICATIONS

Giantin (N-18) is recommended for detection of Giantin of mouse, rat and human 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).

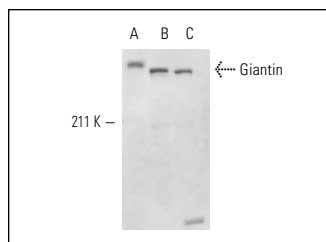
Giantin (N-18) is also recommended for detection of Giantin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Giantin siRNA (h): sc-60685, Giantin siRNA (m): sc-60686, Giantin shRNA Plasmid (h): sc-60685-SH, Giantin shRNA Plasmid (m): sc-60686-SH, Giantin shRNA (h) Lentiviral Particles: sc-60685-V and Giantin shRNA (m) Lentiviral Particles: sc-60686-V.

Molecular Weight of Giantin: 376 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 or TT whole cell lysate: sc-364195.

## DATA



Giantin (N-18): sc-46993. Western blot analysis of Giantin expression in HeLa (A), Caki-1 (B) and TT (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Christis, C. and Munro, S. 2012. The small G protein Arl1 directs the *trans*-Golgi-specific targeting of the Arf1 exchange factors BIG1 and BIG2. *J. Cell Biol.* 196: 327-335.
2. Wang, L., et al. 2014. Leucyl-tRNA synthetase regulates lactation and cell proliferation via mTOR signaling in dairy cow mammary epithelial cells. *Int. J. Mol. Sci.* 15: 5952-5969.

## PROTOCOLS

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