

# Giantin (2388C3a): sc-81279

## 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 OCRL 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.
6. Beard, M., et al. 2005. A cryptic Rab 1-binding site in the p115 tethering protein. *J. Biol. Chem.* 280: 25840-25848.
7. Malsam, J., et al. 2005. Golgin tethers define subpopulations of COPI vesicles. *Science* 307: 1095-1098.

## CHROMOSOMAL LOCATION

Genetic locus: GOLGB1 (human) mapping to 3q13.33.

## SOURCE

Giantin (2388C3a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of Giantin of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## APPLICATIONS

Giantin (2388C3a) is recommended for detection of Giantin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

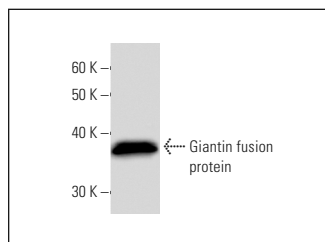
Molecular Weight of Giantin: 376 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



Giantin (2388C3a): sc-81279. Western Blot analysis of human recombinant Giantin fusion protein.

## SELECT PRODUCT CITATIONS

1. Delaunay, J.L., et al. 2009. A missense mutation in ABCB4 gene involved in progressive familial intrahepatic cholestasis type 3 leads to a folding defect that can be rescued by low temperature. *Hepatology* 49: 1218-1227.

## 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) for detailed protocols and support products.