

GS27 (25): sc-135932

BACKGROUND

In eukaryotic cells, the Golgi apparatus receives newly synthesized proteins from the endoplasmic reticulum and delivers them after covalent modification to their destination in the cell. For membrane-directed proteins this process is believed to be carried out via vesicular transport. Correct vesicular transport is determined by specific pairing of vesicle-associated SNAREs (v-SNAREs) with those on the target membrane (t-SNAREs). This complex then recruits soluble NSF attachment proteins (SNAPs) and N-ethylmaleimide-sensitive factor (NSF) to form the highly stable SNAP receptor (SNARE) complex. The formation of a SNARE complex pulls the vesicle and target membranes together and may provide the energy to drive the fusion of the lipid bilayers. GS27 and GS28 belong to the SNARE protein family and are important trafficking proteins between the endoplasmic reticulum and the Golgi and between Golgi subcompartments. GS27 and GS28 both exist as cytoplasmically oriented integral membrane proteins. The human GS27 gene, which maps to chromosome 17q21.32, is located near a locus implicated in familial essential hypertension, indicating that it is a potential candidate gene for this disease. The human GS28 gene maps to chromosome 17q11.2.

REFERENCES

1. Nagahama, M., et al. 1996. A v-SNARE implicated in intra-Golgi transport. *J. Cell Biol.* 133: 507-516.
2. Lowe, S.L., et al. 1997. A SNARE involved in protein transport through the Golgi apparatus. *Nature* 389: 881-884.
3. Hay, J.C., et al. 1997. Protein interactions regulating vesicle transport between the endoplasmic reticulum and Golgi apparatus in mammalian cells. *Cell* 89: 149-158.
4. Bui, T.D., et al. 1999. cDNA characterization and chromosomal mapping of human Golgi SNARE GS27 and GS28 to chromosome 17. *Genomics* 57: 285-288.
5. Bentz, J. and Mittal, A. 2000. Deployment of membrane fusion protein domains during fusion. *Cell Biol. Int.* 24: 819-838.
6. Gmachl, M.J. and Wimmer, C. 2001. Sequential involvement of p115, SNAREs, and Rab proteins in intra-Golgi protein transport. *J. Biol. Chem.* 276: 18178-18184.
7. LocusLink Report (LocusID: 9527). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: GOSR2 (human) mapping to 17q21.32.

SOURCE

GS27 (25) is a mouse monoclonal antibody raised against amino acids 5-124 of GS27 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

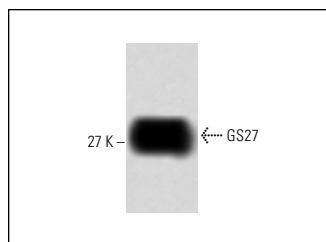
GS27 (25) is recommended for detection of GS27 of human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for GS27 siRNA (h): sc-41304, GS27 shRNA Plasmid (h): sc-41304-SH and GS27 shRNA (h) Lentiviral Particles: sc-41304-V.

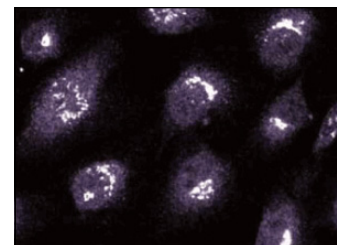
Molecular Weight of GS27: 27 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

DATA



GS27 (25): sc-135932. Western blot analysis of GS27 expression in Jurkat whole cell lysate.



GS27 (25): sc-135932. Immunofluorescence staining of human endothelial cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Adolf, F., et al. 2016. Sec24C/D-isoform-specific sorting of the preassembled ER-Golgi Q-SNARE complex. *Mol. Biol. Cell* 27: 2697-2707.
2. Adolf, F., et al. 2019. Proteomic profiling of mammalian COPII and COPI vesicles. *Cell Rep.* 26: 250-265.e5.

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. Not for resale.

PROTOCOLS

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