

# GS28 (E-7): sc-133148

## 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. Golgi SNARE 27 kDa (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., Orci, L., Ravazzola, M., Amherdt, M., Lacomis, L., Tempst, P., Rothman, J.E. and Sollner, T.H. 1996. A v-SNARE implicated in intra-Golgi transport. *J. Cell Biol.* 133: 507-516.
2. Lowe, S.L., Peter, F., Subramaniam, V.N., Wong, S.H. and Hong, W. 1997. A SNARE involved in protein transport through the Golgi apparatus. *Nature* 389: 881-884.
3. Hay, J.C., Chao, D.S., Kuo, C.S. and Scheller, R.H. 1997. Protein interactions regulating vesicle transport between the endoplasmic reticulum and Golgi apparatus in mammalian cells. *Cell* 89: 149-158.
4. Bui, T.D., Levy, E.R., Subramaniam, V.N., Lowe, S.L. and Hong, W. 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: 819-938.
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.

## CHROMOSOMAL LOCATION

Genetic locus: GOSR1 (human) mapping to 17q11.2; Gosr1 (mouse) mapping to 11 B5.

## SOURCE

GS28 (E-7) is a mouse monoclonal antibody raised against amino acids 1-250 representing full length GS28 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

GS28 (E-7) is recommended for detection of GS28 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GS28 siRNA (h): sc-41306, GS27 siRNA (m): sc-41305, GS28 shRNA Plasmid (h): sc-41306-SH, GS27 shRNA Plasmid (m): sc-41305-SH, GS28 shRNA (h) Lentiviral Particles: sc-41306-V and GS27 shRNA (m) Lentiviral Particles: sc-41305-V.

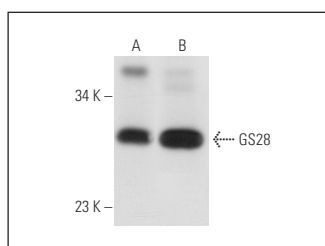
Molecular Weight of GS28: 28 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213, JAR cell lysate: sc-2276 or TK-1 whole cell lysate: sc-364798 .

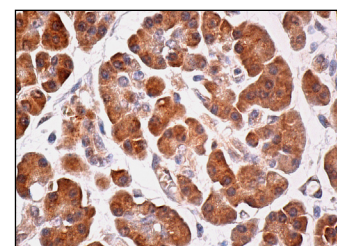
## RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



GS28 (E-7): sc-133148. Western blot analysis of GS28 expression in JAR (A) and WEHI-231 (B) whole cell lysates.



GS28 (E-7): sc-133148. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

## 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.

## PROTOCOLS

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