

GM130 (P-20): sc-16268

BACKGROUND

The docking of transport vesicles to their target membrane is mediated by p115. 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 amino-terminus of GM130 binds to p115, whereas the carboxy-terminus binds to Golgi membranes. Both giantin and GM130 compete for binding to p115. Thus, p115-giantin and p115-GM130 interactions might mediate independent membrane tethering events. Transport from the ER to the *cis*/medial Golgi compartments requires the action of p115, GM130 and giantin via a sequential rather than a coordinate mechanism. Mitotic phosphorylation of GM130 at Serine 25 is mediated by Cdc2, prevents binding to p115, and is directly involved in mitotic Golgi fragmentation. GM130 is phosphorylated in prophase as the Golgi complex starts to break down, and remains phosphorylated in meta-phase and anaphase. In telophase, GM130 is dephosphorylated by PP2A as the Golgi fragments start to reassemble.

CHROMOSOMAL LOCATION

Genetic locus: GOLGA2 (human) mapping to 9q34.11.

SOURCE

GM130 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GM130 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-16268 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GM130 (P-20) is recommended for detection of GM130 of 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).

Suitable for use as control antibody for GM130 siRNA (h): sc-41224, GM130 shRNA Plasmid (h): sc-41224-SH and GM130 shRNA (h) Lentiviral Particles: sc-41224-V.

Molecular Weight of GM130: 130 kDa.

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

RESEARCH USE

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

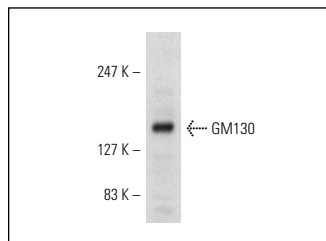
PROTOCOLS

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

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



GM130 (P-20): sc-16268. Western blot analysis of GM130 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Leisenfelder, S.A., et al. 2006. Varicella-zoster virus infection of human foreskin fibroblast cells results in atypical cyclin expression and cyclin-dependent kinase activity. *J. Virol.* 80: 5577-5587.
2. Shaul, Y.D., et al. 2006. ERK1c regulates Golgi fragmentation during mitosis. *J. Cell Biol.* 172: 885-897.
3. Clarke, C.J., et al. 2007. Role for neutral sphingomyelinase-2 in tumor necrosis factor α -stimulated expression of vascular cell adhesion molecule-1 (VCAM) and intercellular adhesion molecule-1 (ICAM) in lung epithelial cells: p38 MAPK is an upstream regulator of N-SMase2. *J. Biol. Chem.* 282: 1384-1396.
4. Shiokawa, D., et al. 2007. DNase X is a glycosylphosphatidylinositol-anchored membrane enzyme that provides a barrier to endocytosis-mediated transfer of a foreign gene. *J. Biol. Chem.* 282: 17132-17140.
5. Fidalgo, M., et al. 2010. CCM3/PDCD10 stabilizes GCKIII proteins to promote Golgi assembly and cell orientation. *J. Cell Sci.* 123: 1274-1284.
6. Lafont, E., et al. 2010. Caspase-mediated inhibition of sphingomyelin synthesis is involved in Fas_L-triggered cell death. *Cell Death Differ.* 17: 642-654.
7. Fidalgo, M., et al. 2012. Adaptor protein cerebral cavernous malformation 3 (CCM3) mediates phosphorylation of the cytoskeletal proteins ezrin/radixin/moesin by mammalian Ste20-4 to protect cells from oxidative stress. *J. Biol. Chem.* 287: 11556-11565.
8. Reiling, J.H., et al. 2013. A CREB3-ARF4 signalling pathway mediates the response to Golgi stress and susceptibility to pathogens. *Nat. Cell Biol.* 15: 1473-1485.



Try **GM130 (H-7): sc-55590** or **GM130 (B-10): sc-55591**, our highly recommended monoclonal alternatives to GM130 (P-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **GM130 (H-7): sc-55590**.