

GM130 (B-10): sc-55591

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 metaphase 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; Golga2 (mouse) mapping to 2 B.

SOURCE

GM130 (B-10) is a mouse monoclonal antibody raised against amino acids 191-255 mapping within an internal region of GM130 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GM130 (B-10) is available conjugated to agarose (sc-55591 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55591 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55591 PE), fluorescein (sc-55591 FITC), Alexa Fluor® 488 (sc-55591 AF488), Alexa Fluor® 546 (sc-55591 AF546), Alexa Fluor® 594 (sc-55591 AF594) or Alexa Fluor® 647 (sc-55591 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55591 AF680) or Alexa Fluor® 790 (sc-55591 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GM130 (B-10) is recommended for detection of GM130 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) 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 siRNA (m): sc-41225, GM130 shRNA Plasmid (h): sc-41224-SH, GM130 shRNA Plasmid (m): sc-41225-SH, GM130 shRNA (h) Lentiviral Particles: sc-41224-V and GM130 shRNA (m) Lentiviral Particles: sc-41225-V.

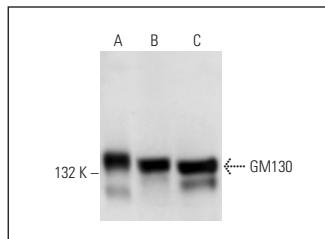
Molecular Weight of GM130: 130 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse liver extract: sc-2256 or rat liver extract: sc-2395.

STORAGE

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

DATA



GM130 (B-10): sc-55591. Western blot analysis of GM130 expression in Hep G2 whole cell lysate (A) and mouse liver (B) and rat liver (C) tissue extracts.

SELECT PRODUCT CITATIONS

- Kanojia, D., et al. 2011. Sperm-associated antigen 9 is a novel biomarker for colorectal cancer and is involved in tumor growth and tumorigenicity. *Am. J. Pathol.* 178: 1009-1020.
- Adolf, F., et al. 2013. Scission of COPI and COPII vesicles is independent of GTP hydrolysis. *Traffic* 14: 922-932.
- Jagadish, N., et al. 2015. A-kinase anchor protein 4 (AKAP4) a promising therapeutic target of colorectal cancer. *J. Exp. Clin. Cancer Res.* 34: 142.
- Jagadish, N., et al. 2016. Heat shock protein 70-2 (HSP70-2) is a novel therapeutic target for colorectal cancer and is associated with tumor growth. *BMC Cancer* 16: 561.
- Vogelgesang, S., et al. 2017. Analysis of the serotonergic system in a mouse model of rett syndrome reveals unusual upregulation of serotonin receptor 5b. *Front. Mol. Neurosci.* 10: 61.
- Zhang, Y., et al. 2017. Hypothalamic stem cells control ageing speed partly through exosomal miRNAs. *Nature* 548: 52-57.
- Krokowski, D., et al. 2017. GADD34 function in protein trafficking promotes adaptation to hyperosmotic stress in human corneal cells. *Cell Rep.* 21: 2895-2910.
- Jagadish, N., et al. 2018. Sperm associated antigen 9 (SPAG9) a promising therapeutic target of ovarian carcinoma. *Tumour Biol.* 40: 1010428318773652.
- Sanz-Rubio, D., et al. 2018. Stability of circulating exosomal miRNAs in healthy subjects. *Sci. Rep.* 8: 10306.
- Shin, H.S., et al. 2019. ALPL2 is a potential diagnostic biomarker for pancreatic cancer-derived extracellular vesicles. *Mol. Ther. Methods Clin. Dev.* 15: 204-210.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA