

p-GM130 (C-11): sc-377549

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

p-GM130 (C-11) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 25 phosphorylated GM130 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-GM130 (C-11) is available conjugated to agarose (sc-377549 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377549 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377549 PE), fluorescein (sc-377549 FITC), Alexa Fluor® 488 (sc-377549 AF488), Alexa Fluor® 546 (sc-377549 AF546), Alexa Fluor® 594 (sc-377549 AF594) or Alexa Fluor® 647 (sc-377549 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377549 AF680) or Alexa Fluor® 790 (sc-377549 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377549 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

PROTOCOLS

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

APPLICATIONS

p-GM130 (C-11) is recommended for detection of Ser 25 phosphorylated 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).

p-GM130 (C-11) is also recommended for detection of correspondingly phosphorylated GM130 in additional species, including bovine.

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.

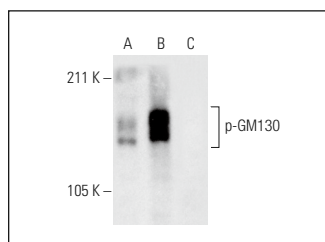
Molecular Weight of p-GM130: 130 kDa.

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, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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



Western blot analysis of GM130 phosphorylation in untreated (A), Ser/Thr induction cocktail (sc-362324) treated (B) and Ser/Thr induction cocktail (sc-362324) and lambda protein phosphatase (sc-200312A) treated (C) HeLa whole cell lysates. Antibody tested include p-GM130 (C-11): sc-377549.

SELECT PRODUCT CITATIONS

1. Mohamed, N.V., et al. 2017. Tau secretion is correlated to an increase of Golgi dynamics. PLoS ONE 12: e0178288.

RESEARCH USE

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