

GRASP55 (21): sc-136395

BACKGROUND

The Golgi apparatus is a highly complex organelle comprised of a stack of cisternal membranes on the secretory pathway from the ER to the cell surface. The structure is maintained by an exoskeleton or Golgi matrix constructed from a family of coiled-coil protein, the golgins and other peripheral membrane components such as GRASP55 and GRASP65. GRASP55 (Golgi reassembly stacking protein or p59) is a component of the Golgi stacking machinery. GRASP55 is highly homologous to GRASP65 and contains two PDZ domains. GRASP55 is myristoylated and palmitoylated. Unlike GRASP65, GRASP55 does not have detectable binding with the vesicle docking protein GM130 and is located on the medial-Golgi rather than *cis*-Golgi. Both GRASP55 and GRASP65 function in the stacking of Golgi cisternae. The novel coiled-coil protein golgin 45 interacts with GRASP55 and the GTP form of Rab 2, suggesting that GRASP55 and golgin 45 form a Rab 2 effector complex on medial-Golgi essential for normal protein transport and Golgi structure. ERK2 directly phosphorylates GRASP55, which is phosphorylated in mitotic cells, suggesting that mitogen-activated protein kinase kinase (MKK)/ERK pathway phosphorylates the Golgi during mitosis.

REFERENCES

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- Barr, F.A., Preisinger, C., Kopajtich, R. and Korner, R. 2001. Golgi matrix proteins interact with p24 cargo receptors and aid their efficient retention in the Golgi apparatus. *J. Cell Biol.* 155: 885-891.
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- Jesch, S.A., Lewis, T.S., Ahn, N.G. and Linstedt, A.D. 2001. Mitotic phosphorylation of Golgi reassembly stacking protein 55 by mitogen-activated protein kinase ERK2. *Mol. Biol. Cell* 12: 1811-1817.

CHROMOSOMAL LOCATION

Genetic locus: GORASP2 (human) mapping to 2q31.1; Gorasp2 (mouse) mapping to 2 C2.

SOURCE

GRASP55 (21) is a mouse monoclonal antibody raised against amino acids 301-415 of GRASP55 of rat origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

GRASP55 (21) is recommended for detection of GRASP55 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 GRASP55 siRNA (h): sc-41226, GRASP55 siRNA (m): sc-41227, GRASP55 shRNA Plasmid (h): sc-41226-SH, GRASP55 shRNA Plasmid (m): sc-41227-SH, GRASP55 shRNA (h) Lentiviral Particles: sc-41226-V and GRASP55 shRNA (m) Lentiviral Particles: sc-41227-V.

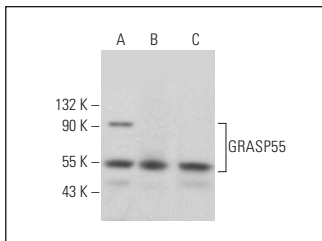
Molecular Weight of GRASP55: 55 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, DU 145 cell lysate: sc-2268 or HeLa whole cell lysate: sc-2200.

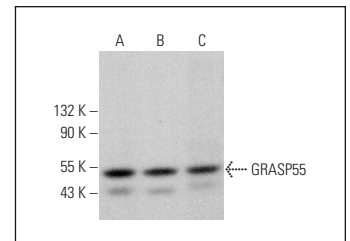
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



GRASP55 (21): sc-136395. Western blot analysis of GRASP55 expression in NIH/3T3 (A), HeLa (B) and DU 145 (C) whole cell lysates.



GRASP55 (21): sc-136395. Western blot analysis of GRASP55 expression in Neuro-2A (A), F9 (B) and 3T3-L1 (C) whole cell lysates.

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.