SANTA CRUZ BIOTECHNOLOGY, INC.

GRASP65 (D-12): sc-374423

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 protien 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.

CHROMOSOMAL LOCATION

Genetic locus: GORASP1 (human) mapping to 3p22.2; Gorasp1 (mouse) mapping to 9 F4.

SOURCE

GRASP65 (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 347-385 near the C-terminus of GRASP65 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRASP65 (D-12) is available conjugated to agarose (sc-374423 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374423 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374423 PE), fluorescein (sc-374423 FITC), Alexa Fluor® 488 (sc-374423 AF488), Alexa Fluor® 546 (sc-374423 AF546), Alexa Fluor® 594 (sc-374423 AF594) or Alexa Fluor® 647 (sc-374423 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374423 AF680) or Alexa Fluor® 790 (sc-374423 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374423 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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

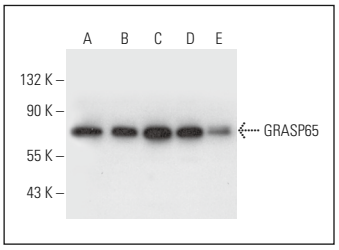
GRASP65 (D-12) is recommended for detection of GRASP65 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 GRASP65 siRNA (h): sc-41228, GRASP65 siRNA (m): sc-41229, GRASP65 shRNA Plasmid (h): sc-41228-SH, GRASP65 shRNA Plasmid (m): sc-41229-SH, GRASP65 shRNA (h) Lentiviral Particles: sc-41228-V and GRASP65 shRNA (m) Lentiviral Particles: sc-41229-V.

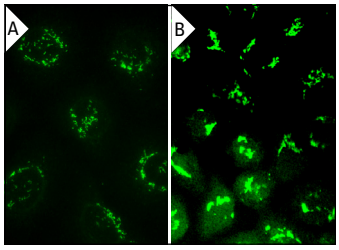
Molecular Weight of GRASP65: 65 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

DATA



GRASP65 (D-12): sc-374423. Western blot analysis of GRASP65 expression in Hep G2 (**A**), HeLa (**B**), MCF7 (**C**), OVCAR-3 (**D**) and A549 (**E**) whole cell lysates.



GRASP65 (D-12): sc-374423. Immunofluorescence staining of methanol-fixed HeLa cells showing Golgi apparatus localization (**A**,**B**).

SELECT PRODUCT CITATIONS

1. Abdel Hafez, S.M.N., et al. 2019. Impact of renal ischemia/reperfusion injury on the rat Kupffer cell as a remote cell: a biochemical, histological, immunohistochemical, and electron microscopic study. Acta Histochem. 121: 575-583.
2. Tan, X., et al. 2021. A pro-tumorigenic secretory pathway activated by p53 deficiency in lung adenocarcinoma. J. Clin. Invest. 131: e137186.
3. Zhang, Y. and Seemann, J. 2021. Rapid degradation of GRASP55 and GRASP65 reveals their immediate impact on the Golgi structure. J. Cell Biol. 220: e202007052.
4. Ahat, E., et al. 2022. GRASP depletion-mediated Golgi fragmentation impairs glycosaminoglycan synthesis, sulfation, and secretion. Cell. Mol. Life Sci. 79: 199.
5. Iglesias-Ortega, L., et al. 2023. Cell consequences of loss of function of the epigenetic factor EHMT1. Cell. Signal. 108: 110734.

RESEARCH USE

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