SANTA CRUZ BIOTECHNOLOGY, INC.

GRASP65 (H-2): sc-365434

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.

SOURCE

GRASP65 (H-2) is a mouse monoclonal antibody raised against amino acids 211-440 mapping at 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.

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 (H-2) is recommended for detection of GRASP65 of 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 shRNA Plasmid (h): sc-41228-SH and GRASP65 shRNA (h) Lentiviral Particles: sc-41228-V.

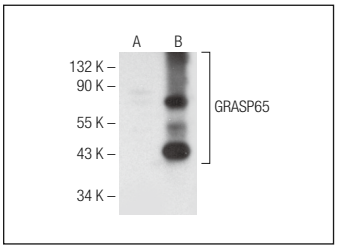
Molecular Weight of GRASP65: 65 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or GRASP65 (h): 293T Lysate: sc-117395.

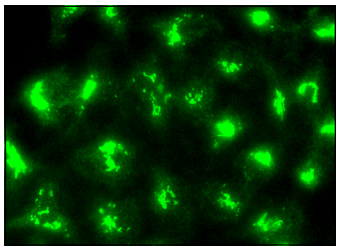
RECOMMENDED SUPPORT REAGENTS

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, 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-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



GRASP65 (H-2): sc-365434. Western blot analysis of GRASP65 expression in non-transfected: sc-117752 (**A**) and human GRASP65 transfected: sc-117395 (**B**) 293T whole cell lysates.



GRASP65 (H-2): sc-365434. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Petrosyan, A., et al. 2014. Restoration of compact Golgi morphology in advanced prostate cancer enhances susceptibility to galectin-1-induced apoptosis by modifying mucin O-glycan synthesis. Mol. Cancer Res. 12: 1704-1716.
2. Casey, C.A., et al. 2016. Study of ethanol-induced Golgi disorganization reveals the potential mechanism of alcohol-impaired N-glycosylation. Alcohol. Clin. Exp. Res. 40: 2573-2590.
3. Bhat, G., et al. 2017. Shifted Golgi targeting of glycosyltransferases and α-mannosidase IA from giantin to GM130-GRASP65 results in formation of high mannose N-glycans in aggressive prostate cancer cells. Biochim. Biophys. Acta 1861: 2891-2901.
4. Casey, C.A., et al. 2018. Giantin is required for post-alcohol recovery of golgi in liver cells. Biomolecules 8: 150.
5. Manca, S., et al. 2019. The role of alcohol-induced Golgi fragmentation for androgen receptor signaling in prostate cancer. Mol. Cancer Res. 17: 225-237.
6. Mahanty, S., et al. 2024. Biogenesis of specialized lysosomes in differentiated keratinocytes relies on close apposition with the Golgi apparatus. Cell Death Dis. 15: 496.

RESEARCH USE

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