

golgin 45 (E-3): sc-515193

BACKGROUND

Golgin 45, also known as JEM-1 or basic leucine zipper nuclear factor 1, is a 400 amino acid protein that localizes to the lumen of the Golgi apparatus. The primary function of golgin 45 is to maintain normal Golgi structure and to facilitate protein transport from the endoplasmic reticulum to the cell surface. The latter process is regulated primarily through the interaction of golgin 45 and GRASP55, which, together, form a Rab 2 effector complex. Excluding formation of a Rab 2 complex, golgin 45 does not interact with any other Golgi Rab proteins. Golgin 45 is expressed as two isoforms, one of which localizes to the nucleus and is thought to function as a transcription factor.

REFERENCES

1. Duprez, E., et al. 1997. JEM-1, a novel gene encoding a leucine-zipper nuclear factor upregulated during retinoid-induced maturation of NB4 promyelocytic leukaemia. *Oncogene* 14: 1563-1570.
2. Tong, J.H., et al. 1998. Expression patterns of the JEM-1 gene in normal and tumor cells: ubiquity contrasting with a faint, but retinoid-induced, mRNA expression in promyelocytic NB4 cells. *Leukemia* 12: 1733-1740.
3. Tong, J.H., et al. 1999. JEM-1, a novel nuclear co-factor: localisation and functional interaction with AP-1. *Leukemia* 13: 1982-1992.
4. Tong, J.H., et al. 2000. Genomic organization of the JEM-1 (BLZF1) gene on human chromosome 1q24: molecular cloning and analysis of its promoter region. *Genomics* 69: 380-390.
5. Short, B., et al. 2001. A GRASP55-rab2 effector complex linking Golgi structure to membrane traffic. *J. Cell Biol.* 155: 877-883.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608692. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim>

CHROMOSOMAL LOCATION

Genetic locus: BLZF1 (human) mapping to 1q24.2.

SOURCE

golgin 45 (E-3) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of golgin 45 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.

golgin 45 (E-3) is available conjugated to agarose (sc-515193 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515193 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515193 PE), fluorescein (sc-515193 FITC), Alexa Fluor[®] 488 (sc-515193 AF488), Alexa Fluor[®] 546 (sc-515193 AF546), Alexa Fluor[®] 594 (sc-515193 AF594) or Alexa Fluor[®] 647 (sc-515193 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515193 AF680) or Alexa Fluor[®] 790 (sc-515193 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

golgin 45 (E-3) is recommended for detection of golgin 45 isoforms 1 and 2 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 golgin 45 siRNA (h): sc-88282, golgin 45 shRNA Plasmid (h): sc-88282-SH and golgin 45 shRNA (h) Lentiviral Particles: sc-88282-V.

Molecular Weight of golgin 45 isoform 1: 45 kDa.

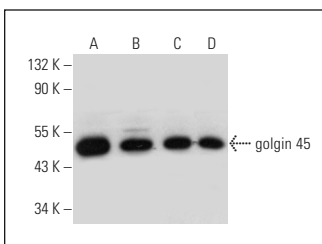
Molecular Weight of golgin 45 isoform 2: 23 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A549 cell lysate: sc-2413 or COLO 205 whole cell lysate: sc-364177.

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



golgin 45 (E-3): sc-515193. Western blot analysis of golgin 45 expression in A549 (A), Jurkat (B), COLO 205 (C) and Hep G2 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. 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.

STORAGE

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

RESEARCH USE

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