SANTA CRUZ BIOTECHNOLOGY, INC.

MIRAB13 (F-3): sc-398397

BACKGROUND

MIRAB13 (molecule interacting with Rab13), also known as MICALL1 (MICAL-like 1), is an 863 amino acid cytoplasmic protein belonging to the MICAL family that contains one CH (calponin-homology) domain, one LIM zinc-binding domain and two unique asparagine-proline-phenylalanine motifs, which are known to interact with EH-domains. Considered a cytoskeletal regulator, MIRAB13 associates with Rab 13, a tight junction protein, as well as EHD, a key regulator of ligand-induced endocytosis and recycling. MIRAB13 is encoded by a gene located on human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. Chromosome 22. Genet. Test. 2: 89-97.
2. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. Am. J. Med. Genet. 88: 276-278.
3. Tsilchorozidou, T., et al. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. J. Med. Genet. 41: 529-534.
4. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. J. Hum. Genet. 51: 1037-1045.
5. Sharma, M., et al. 2009. MICAL-L1 links EHD1 to tubular recycling endosomes and regulates receptor recycling. Mol. Biol. Cell 20: 5181-5194.

CHROMOSOMAL LOCATION

Genetic locus: MICALL1 (human) mapping to 22q13.1; Micall1 (mouse) mapping to 15 E1.

SOURCE

MIRAB13 (F-3) is a mouse monoclonal antibody raised against amino acids 743-804 mapping near the C-terminus of MIRAB13 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.

MIRAB13 (F-3) is available conjugated to agarose (sc-398397 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398397 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398397 PE), fluorescein (sc-398397 FITC), Alexa Fluor® 488 (sc-398397 AF488), Alexa Fluor® 546 (sc-398397 AF546), Alexa Fluor® 594 (sc-398397 AF594) or Alexa Fluor® 647 (sc-398397 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398397 AF680) or Alexa Fluor® 790 (sc-398397 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

MIRAB13 (F-3) is recommended for detection of MIRAB13 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 MIRAB13 siRNA (h): sc-75790, MIRAB13 siRNA (m): sc-149442, MIRAB13 shRNA Plasmid (h): sc-75790-SH, MIRAB13 shRNA Plasmid (m): sc-149442-SH, MIRAB13 shRNA (h) Lentiviral Particles: sc-75790-V and MIRAB13 shRNA (m) Lentiviral Particles: sc-149442-V.

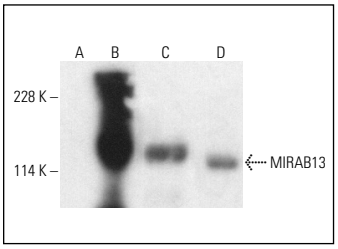
Molecular Weight of MIRAB13: 116 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or MIRAB13 (h3): 293T Lysate: sc-369213.

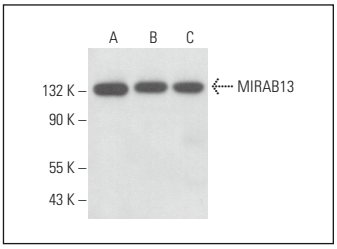
RECOMMENDED SUPPORT REAGENTS

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



MIRAB13 (F-3): sc-398397. Western blot analysis of MIRAB13 expression in non-transfected 293T: sc-117752 (**A**), human MIRAB13 transfected 293T: sc-369213 (**B**), JEG-3 (**C**) and U-2 OS (**D**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



MIRAB13 (F-3): sc-398397. Western blot analysis of MIRAB13 expression in HeLa (**A**), MCF7 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Takahashi, Y., et al. 2017. Regulation of tubular recycling endosome biogenesis by the p53-MICALL1 pathway. Int. J. Oncol. 51: 724-736.

STORAGE

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