

MICAL1 (D-3): sc-515814

BACKGROUND

MICAL1 (microtubule associated monoxygenase, calponin and LIM domain containing 1), also known as MICAL or NICAL, is a 1,067 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains one LIM zinc-binding domain and one calponin-homology domain. Expressed in kidney, thymus, spleen, lung and testis, MICAL1 interacts with the SH3 domain of Cas-L and, via this interaction, is thought to function as a cytoskeletal regulator that connects Cas-L to intermediate filaments. MICAL1 also interacts with Rab 1B, plexin-A3 and Vimentin, further regulating cytoskeletal events and possibly playing a role in axonal repulsion. Three isoforms of MICAL1 exist due to alternative splicing events.

REFERENCES

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2. Suzuki, T., Nakamoto, T., Ogawa, S., Seo, S., Matsumura, T., Tachibana, K., Morimoto, C. and Hirai, H. 2002. MICAL, a novel CasL interacting molecule, associates with vimentin. *J. Biol. Chem.* 277: 14933-14941.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607129. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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5. Bayer, M., Fischer, J., Kremerskothen, J., Ossendorf, E., Matanis, T., Konczal, M., Weide, T. and Barnekow, A. 2005. Identification and characterization of Iporin as a novel interaction partner for rab1. *BMC Cell Biol.* 6: 15.

CHROMOSOMAL LOCATION

Genetic locus: MICAL1 (human) mapping to 6q21; Mical1 (mouse) mapping to 10 B1.

SOURCE

MICAL1 (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 768-792 within an internal region of MICAL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MICAL1 (D-3) is available conjugated to agarose (sc-515814 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515814 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515814 PE), fluorescein (sc-515814 FITC), Alexa Fluor® 488 (sc-515814 AF488), Alexa Fluor® 546 (sc-515814 AF546), Alexa Fluor® 594 (sc-515814 AF594) or Alexa Fluor® 647 (sc-515814 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515814 AF680) or Alexa Fluor® 790 (sc-515814 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MICAL1 (D-3) is recommended for detection of MICAL1 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 MICAL1 siRNA (h): sc-95537, MICAL1 siRNA (m): sc-149423, MICAL1 shRNA Plasmid (h): sc-95537-SH, MICAL1 shRNA Plasmid (m): sc-149423-SH, MICAL1 shRNA (h) Lentiviral Particles: sc-95537-V and MICAL1 shRNA (m) Lentiviral Particles: sc-149423-V.

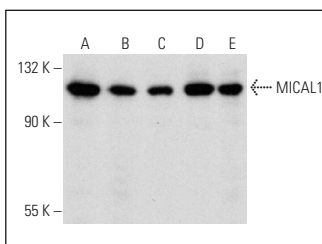
Molecular Weight of MICAL1: 118 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HL-60 whole cell lysate: sc-2209 or SK-MEL-28 cell lysate: sc-2236.

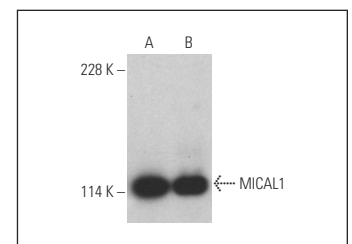
RECOMMENDED SUPPORT REAGENTS

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



MICAL1 (D-3): sc-515814. Western blot analysis of MICAL1 expression in Jurkat (A), HL-60 (B), Hs67 (C), SK-MEL-28 (D) and THP-1 (E) whole cell lysates.



MICAL1 (D-3) HRP: sc-515814 HRP. Direct western blot analysis of MICAL1 expression in THP-1 (A) and Jurkat (B) 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.

RESEARCH USE

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

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