

JRAB (F-5): sc-376675

BACKGROUND

JRAB (junctional Rab13-binding protein, MICAL-like protein 2) is a 904 amino acid protein with one CH (calponin-homology) domain and one LIM zinc-binding domain. JRAB has been shown to interact with Rab13 and Rab8 to facilitate cellular transport of claudin-1, occludin, and E-cadherin. This interaction is vital for the coordination of the assembly of tight junctions (TJs) and adherens junctions (AJs). Dynamic turnover (endocytic recycling) of cell-to-cell AJs and TJs is essential for epithelial morphogenesis during normal development and differentiation. The endocytic recycling of occludin and claudin proteins is part of an ongoing process of restructuring and maintaining cell junctions, especially at TJs. JRAB and Rab13 have also been implicated in the carcinoma metastasis event of epithelial cell scattering. This event shows Rab13 and JRAB colocalizing with F-Actin in lamellipodial structures prior to cell scattering.

REFERENCES

1. Terai, T., et al. 2006. JRAB/MICAL-L2 is a junctional Rab 13-binding protein mediating the endocytic recycling of Occludin. *Mol. Biol. Cell* 17: 2465-2475.
2. Nishimura, N. and Sasaki, T. 2008. Regulation of epithelial cell adhesion and repulsion: role of endocytic recycling. *J. Med. Invest.* 55: 9-16.
3. Nishimura, N. and Sasaki, T. 2008. Identification and characterization of JRAB/MICAL-L2, a junctional Rab 13-binding protein. *Methods Enzymol.* 438: 141-153.
4. Yamamura, R., et al. 2008. The interaction of JRAB/MICAL-L2 with Rab 8 and Rab 13 coordinates the assembly of tight junctions and adherens junctions. *Mol. Biol. Cell* 19: 971-983.

CHROMOSOMAL LOCATION

Genetic locus: MICALL2 (human) mapping to 7p22.3; Micall2 (mouse) mapping to 5 G2.

SOURCE

JRAB (F-5) is a mouse monoclonal antibody raised against amino acids 561-664 mapping within an internal region of JRAB 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.

JRAB (F-5) is available conjugated to agarose (sc-376675 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376675 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376675 PE), fluorescein (sc-376675 FITC), Alexa Fluor[®] 488 (sc-376675 AF488), Alexa Fluor[®] 546 (sc-376675 AF546), Alexa Fluor[®] 594 (sc-376675 AF594) or Alexa Fluor[®] 647 (sc-376675 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376675 AF680) or Alexa Fluor[®] 790 (sc-376675 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

JRAB (F-5) is recommended for detection of JRAB 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 JRAB siRNA (h): sc-89784, JRAB siRNA (m): sc-146332, JRAB shRNA Plasmid (h): sc-89784-SH, JRAB shRNA Plasmid (m): sc-146332-SH, JRAB shRNA (h) Lentiviral Particles: sc-89784-V and JRAB shRNA (m) Lentiviral Particles: sc-146332-V.

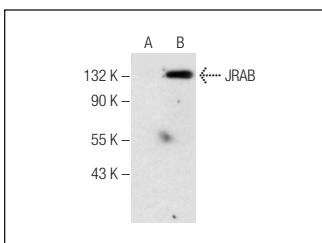
Molecular Weight of JRAB: 100 kDa.

Positive Controls: JRAB (h3): 293T Lysate: sc-177416, MCF7 whole cell lysate: sc-2206 or WI-38 whole cell lysate: sc-364260.

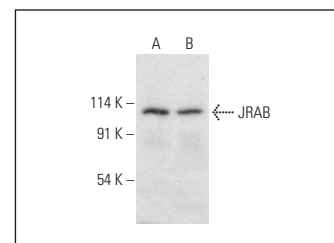
RECOMMENDED SUPPORT REAGENTS

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



JRAB (F-5): sc-376675. Western blot analysis of JRAB expression in non-transfected: sc-117752 (A) and human JRAB transfected: sc-177416 (B) 293T whole cell lysates.



JRAB (F-5): sc-376675. Western blot analysis of JRAB expression in WI-38 (A) and MCF7 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Min, P., et al. 2021. MICAL-L2 is essential for c-Myc deubiquitination and stability in non-small cell lung cancer cells. *Front. Cell Dev. Biol.* 8: 575903.

RESEARCH USE

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

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA