

RIL (D-8): sc-166582

BACKGROUND

RIL (reversion-induced LIM protein), also known as PDZ and LIM domain protein 4, is a widely expressed 334 amino acid protein. RIL contains one PDZ (DHR) domain and one LIM zinc-binding domain. The LIM zinc-binding domain interacts with the second and fourth PDZ domains of Fap-1, possibly resulting in the dephosphorylation of RIL. Although an exact function is unknown, RIL expression in human bone marrow stromal cells suggests involvement in osteoblast development and function. Variations in the RIL gene have been shown to have an allelic dose effect on bone mineral density (BMD), with BMD being an important determinant of osteoporosis. RIL exists as two isoforms, with isoform 2 present in the brain.

REFERENCES

1. Kiess, M., et al. 1995. Expression of RIL, a novel LIM domain gene, is down-regulated in HRas-transformed cells and restored in phenotypic revertants. *Oncogene* 10: 61-68.
2. Bashirova, A.A., et al. 1998. The human RIL gene: mapping to human chromosome 5q31.1, genomic organization and alternative transcripts. *Gene* 210: 239-245.
3. Cuppen, E., et al. 2000. The Zyxin-related protein TRIP6 interacts with PDZ motifs in the adaptor protein RIL and the protein tyrosine phosphatase PTP-BL. *Eur. J. Cell Biol.* 79: 283-293.
4. Walma, T., et al. 2002. Structure, dynamics and binding characteristics of the second PDZ domain of PTP-BL. *J. Mol. Biol.* 316: 1101-1110.

CHROMOSOMAL LOCATION

Genetic locus: PDLIM4 (human) mapping to 5q31.1; Pdlim4 (mouse) mapping to 11 B1.3.

SOURCE

RIL (D-8) is a mouse monoclonal antibody raised against amino acids 71-200 mapping within an internal region of RIL 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.

RIL (D-8) is available conjugated to agarose (sc-166582 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166582 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166582 PE), fluorescein (sc-166582 FITC), Alexa Fluor® 488 (sc-166582 AF488), Alexa Fluor® 546 (sc-166582 AF546), Alexa Fluor® 594 (sc-166582 AF594) or Alexa Fluor® 647 (sc-166582 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166582 AF680) or Alexa Fluor® 790 (sc-166582 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

RIL (D-8) is recommended for detection of RIL 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 RIL siRNA (h): sc-91925, RIL siRNA (m): sc-152959, RIL shRNA Plasmid (h): sc-91925-SH, RIL shRNA Plasmid (m): sc-152959-SH, RIL shRNA (h) Lentiviral Particles: sc-91925-V and RIL shRNA (m) Lentiviral Particles: sc-152959-V.

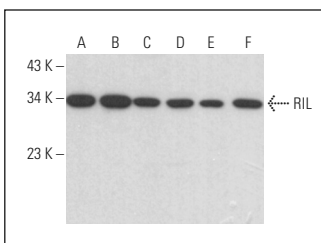
Molecular Weight of RIL: 35 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

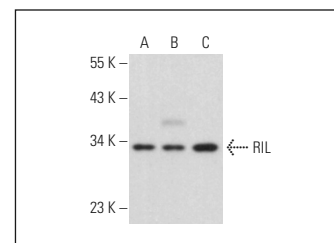
RECOMMENDED SUPPORT REAGENTS

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



RIL (D-8): sc-166582. Western blot analysis of RIL expression in RAW 264.7 (A), M1 (B), C2C12 (C), MH-S (D), Sol8 (E) and EOC 20 (F) whole cell lysates.



RIL (D-8): sc-166582. Western blot analysis of RIL expression in SK-N-SH (A), A-431 (B) and HeLa (C) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Guryanova, O.A., et al. 2011. Actin cytoskeleton remodeling by the alternatively spliced isoform of PDLIM4/RIL protein. *J. Biol. Chem.* 286: 26849-26859.
2. Kravchenko, D.S., et al. 2020. PDLIM4/RIL-mediated regulation of Src and malignant properties of breast cancer cells. *Oncotarget* 11: 22-30.

RESEARCH USE

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