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Datasheet for 600-401-871

Rif1 Antibody

Overview

Description:	Anti-Mouse Rif1 (RABBIT) Antibody - 600-401-871
Item No.:	600-401-871
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	Rif1 (also known as telomere-associated protein RIF1 and Rap1-interacting factor 1) is a mouse ortholog of the yeast Rif1 family of telomere-associated proteins identified on the basis of its high expression in primordial germ cells and embryo-derived pluripotent stem cell lines. Mouse Rif1 is a protein involved in negative regulation of telomere length. It is also localized to ATM dependent DNA damage foci and may act at the chromatin level to allow access to some factors.
Synonyms:	rabbit anti-Rif1 antibody, Rif-1, Rif 1, Telomere-associated protein RIF1, Rap1 interacting factor 1 antibody, Rap1 interacting factor 1 homolog antibody, mRif1, Rap-1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Rif1
Reactivity:	Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to C-Terminal region near amino acids 2375-2419 of Mouse Rif1.

Purity/Specificity:	This affinity purified antibody is directed against mouse Rif1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from mouse based on 100% homology for the immunogen sequence. Expect cross reactivity with Rif1 from human, chimpanzee, rat and dog as only a single amino acid residue change (92% homology) is found for the immunogen sequence. Cross reactivity with Rif1 homologues from other sources has not been determined. Databases confirm that the immunogen sequence represents the C-terminal end of mouse Rif1 (534 aa 58.1 kDa), mouse telomere-associated protein RIF1 (2418 aa 265.7 kDa) and mouse Rap1-interacting factor 1 (2426 267.1 kDa).
Relevant Links:	• UniProtKB - Q6PR54 • NCBI - 68565756 • GeneID - 51869

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 265 kDa in size corresponding to Rif1 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:40,000
WB:	1:500 - 1:3,000

Formulation

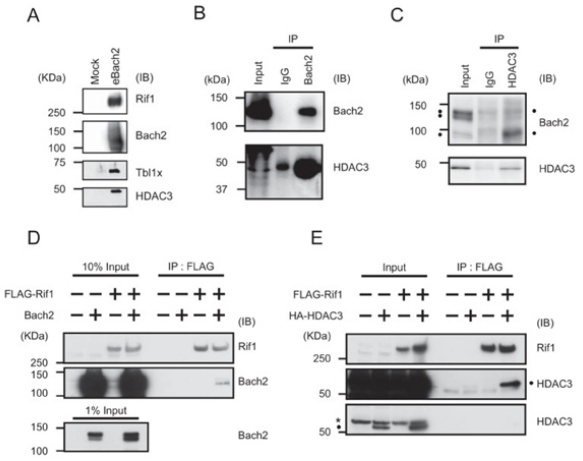
Physical State:	Liquid (sterile filtered)
Concentration:	1.0mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice

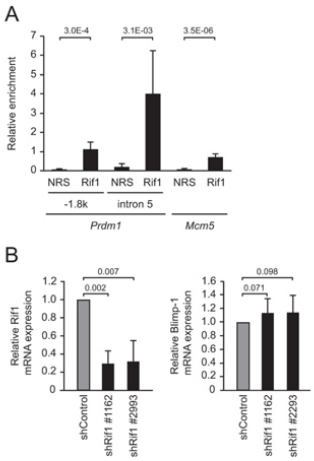
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Bach2-HDAC3-Rif1 interactions. A, immunoblot analysis of the affinity-purified samples (derived from Fig. 4B) using anti-Rif1 anti-Bach2, anti-Tbl1x, or anti-HDAC3 antibodies. B, lysates from BAL17 cells were immunoprecipitated (IP) with anti-Bach2 antiserum (Bach2N-2) or control antibodies (IgG) and analyzed by immunoblotting (IB) using anti-Bach2 or anti-HDAC3 antibodies. Inputs were also analyzed. C, lysates were immunoprecipitated with anti-HDAC3 or control antibodies and analyzed by immunoblotting using anti-Bach2 or anti-HDAC3 antibodies. Inputs were also analyzed.
The dots indicate the bands that reacted with the anti-Bach2 antiserum. D, interaction of Rif1 with Bach2. FLAG-Rif1 and Bach2 were overexpressed in 293T cells in the indicated combinations. FLAG-Rif1 was immunoprecipitated with anti-FLAG antibody. The resulting samples were analyzed by immunoblotting using anti-FLAG or anti-Bach2 antibodies. An image of immunoblotting analysis of input samples (1% amount of loading for immunoprecipitation) is also shown to clarify the levels of Bach2 expression. E, interaction of Rif1 with HDAC3. FLAG-Rif1 and HA-HDAC3 were overexpressed in 293T cells in the indicated combinations, and their interaction was analyzed as in D. An image of shorter exposure is also shown for the HDAC3 immunoblotting (bottom) to clarify the levels of HDAC3 expression. IP, immunoprecipitate. IB, immunoblot.
The dot and asterisk on the left indicate specific and nonspecific bands, respectively. Fig 6. PMID: 26786103



ChIP

Binding of Rif1 to the Prdm1 locus. A, Rif1 binds to the Prdm1 locus. ChIP assays of BAL17 cells were performed with antibody against Rif1. The relative levels of enrichment of the indicated genomic DNA regions are shown as mean values of two independent ChIP assays and standard error of the mean with p values (Student's t test) for differences between anti-Rif1 antibody and normal rabbit serum (NRS). B, effect of Rif1 knockdown on Prdm1 expression. The expression levels of Rif1 (left panel) and Blimp-1 (right panel) mRNA were determined by RT-qPCR in BAL17 cells expressing shRNA targeting Rif1 mRNA and control shRNA. The results are shown as mean values of two independent experiments and standard error of the mean with p values (Student's t test). Fig 8. PMID: 26786103

Western Blot

Western blot using Rockland's Affinity Purified anti-Rif1 antibody shows detection of a band ~265 kDa corresponding to mouse Rif1 (arrowhead). Specific reactivity with this band is blocked when the antibody is pre-incubated with the immunizing peptide (data not shown). Approximately 25 ug of MEF whole cell lysate (p/n W10-001-371) was separated by SDS-PAGE and transferred onto nitrocellulose. After blocking the membrane was probed with the primary antibody diluted to 1.0ug/ml for 2 h at room temperature followed by washes and reaction with a 1:10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] MX (p/n 611-132-122) for 45 min at room temperature. IRDye800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

References

- Tanaka et al. Epigenetic Regulation of the Blimp-1 Gene (Prdm1) in B Cells Involves Bach2 and Histone Deacetylase 3. *Journal of Biological Chemistry* (2016)

Disclaimer

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