

Reptin 52 (B-5): sc-374135

BACKGROUND

Pontin 52 is a nuclear matrix protein that is primarily expressed in the nucleus and is also present in the cytoplasm. It is expressed in the nucleoplasm of whole cells, but is not present in the nucleoli. Pontin 52, also designated RUVBL1 for *E. coli* RuvB-like 1 protein or NMP 238, is the human homolog of rat TIP49. Pontin 52 contains an ATPase/helicase motif and may represent a class of cofactors recruited by transcriptional activation domains that function in diverse pathways. For instance, *in vivo*, Pontin 52 is complexed with Myc and Reptin 52, which is a Pontin 52-related protein, also designated RUVBL2. The interaction of Pontin 52 with Myc is dependent upon a Myc domain essential for oncogenic activity, suggesting that functional Pontin 52 is an essential mediator of Myc oncogenic transformation.

REFERENCES

- Makino, Y., et al. 1998. TIP49, homologous to the bacterial DNA helicase RuvB, acts as an autoantigen in human. *Biochem. Biophys. Res. Commun.* 245: 819-823.
- Holzmann, K., et al. 1998. Identification and characterization of the ubiquitously occurring nuclear matrix protein NMP 238. *Biochem. Biophys. Res. Commun.* 252: 39-45.
- Bauer, A., et al. 1998. Pontin52, an interaction partner of β -catenin, binds to the TATA box binding protein. *Proc. Nat. Acad. Sci. USA* 95: 14787-14792.
- Qiu, X.B., et al. 1998. An eukaryotic RuvB-like protein (RUVBL1) essential for growth. *J. Biol. Chem.* 273: 27786-27793.

CHROMOSOMAL LOCATION

Genetic locus: RUVBL2 (human) mapping to 19q13.33; Ruvbl2 (mouse) mapping to 7 B4.

SOURCE

Reptin 52 (B-5) is a mouse monoclonal antibody raised against amino acids 134-295 mapping within an internal region of Reptin 52 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374135 X, 200 μ g/0.1 ml.

Reptin 52 (B-5) is available conjugated to agarose (sc-374135 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374135 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374135 PE), fluorescein (sc-374135 FITC), Alexa Fluor® 488 (sc-374135 AF488), Alexa Fluor® 546 (sc-374135 AF546), Alexa Fluor® 594 (sc-374135 AF594) or Alexa Fluor® 647 (sc-374135 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374135 AF680) or Alexa Fluor® 790 (sc-374135 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Reptin 52 (B-5) is recommended for detection of Reptin 52 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Reptin 52 (B-5) is also recommended for detection of Reptin 52 in additional species, including equine, canine, bovine and porcine.

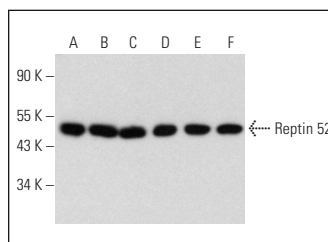
Suitable for use as control antibody for Reptin 52 siRNA (h): sc-43544, Reptin 52 siRNA (m): sc-45513, Reptin 52 shRNA Plasmid (h): sc-43544-SH, Reptin 52 shRNA Plasmid (m): sc-45513-SH, Reptin 52 shRNA (h) Lentiviral Particles: sc-43544-V and Reptin 52 shRNA (m) Lentiviral Particles: sc-45513-V.

Reptin 52 (B-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

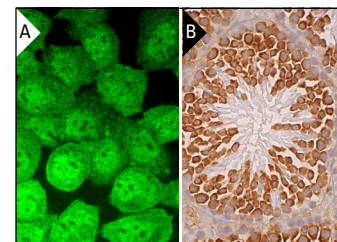
Molecular Weight of Reptin 52: 51 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

DATA



Reptin 52 (B-5): sc-374135. Western blot analysis of Reptin 52 expression in Jurkat (A), Hep G2 (B), c4 (C), NIH/3T3 (D), KNRK (E) and RPE-J (F) whole cell lysates.



Reptin 52 (B-5): sc-374135. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear, cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing cytoplasmic staining of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

- Zimmermann, F., et al. 2020. Assembly of the asymmetric human γ -Tubulin ring complex by RUVBL1-RUVBL2 AAA ATPase. *Sci. Adv.* 6: eabe0894.
- Gkotinakou, I.M., et al. 2021. Novel HIF-2 α interaction with Reptin 52 impairs HIF-2 transcriptional activity and EPO secretion. *Biochem. Biophys. Res. Commun.* 557: 143-150.
- Wang, H., et al. 2022. The transcriptional coactivator RUVBL2 regulates Pol II clustering with diverse transcription factors. *Nat. Commun.* 13: 5703.

STORAGE

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