

Reptin 52 (B-9): sc-365326

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.
- Bauer, A., et al. 1998. Pontin 52, 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.
- Holzmann, K., et al. 1998. Identification and characterization of the ubiquitously occurring nuclear matrix protein NMP 238. *Biochem. Biophys. Res. Commun.* 252: 39-45.
- Wood, M.A., et al. 2000. An ATPase/helicase complex is an essential cofactor for oncogenic transformation by c-Myc. *Mol. Cell* 5: 321-330.

CHROMOSOMAL LOCATION

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

SOURCE

Reptin 52 (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-37 at the N-terminus of Reptin 52 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ 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-365326 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-365326 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Reptin 52 (B-9) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Reptin 52 (B-9) 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-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

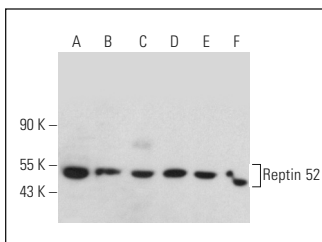
Molecular Weight of Reptin 52: 51 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, c4 whole cell lysate: sc-364186 or NIH/3T3 whole cell lysate: sc-2210.

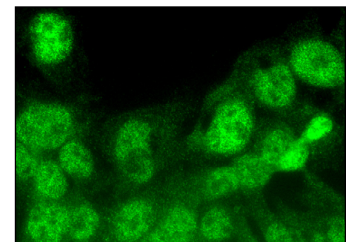
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Reptin 52 (B-9): sc-365326. 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-9): sc-365326. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Yang, S., et al. 2015. Subnuclear domain proteins in cancer cells support the functions of RUNX2 in the DNA damage response. *J. Cell Sci.* 128: 728-740.

RESEARCH USE

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