

Reptin 52 (42): sc-136058

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

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- Bauer, A., Huber, O. and Kemler, R. 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., Lin, Y.L., Thome, K.C., Pian, P., Schlegel, B.P., Weremowicz, S., Parvin, J.D. and Dutta, A. 1998. An eukaryotic RuvB-like protein (RUVBL1) essential for growth. *J. Biol. Chem.* 273: 27786-27793.
- Makino, Y., Mimori, T., Koike, C., Kanemaki, M., Kurokawa, Y., Inoue, S., Kishimoto, T. and Tamura, T. 1998. TIP49, homologous to the bacterial DNA helicase RuvB, acts as an autoantigen in human. *Biochem. Biophys. Res. Commun.* 245: 819-823.
- Wood, M.A., McMahon, S.B. and Cole, M.D. 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 (42) is a mouse monoclonal antibody raised against amino acids 180-228 of Reptin 52 of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

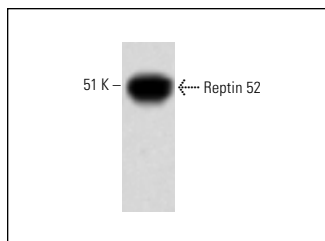
Reptin 52 (42) is recommended for detection of Reptin 52 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

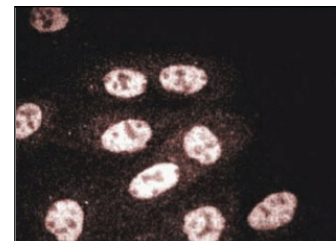
Molecular Weight of Reptin 52: 51 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-BR-3 cell lysate: sc-2218 or mouse kidney extract: sc-2255.

DATA



Reptin 52 (42): sc-136058. Western blot analysis of Reptin 52 expression in HeLa whole cell lysate.



Reptin 52 (42): sc-136058. Immunofluorescence staining of MDCK cells showing nuclear staining.

SELECT PRODUCT CITATIONS

- Osaki, H., Walf-Vorderwülbecke, V., Mangolini, M., Zhao, L., Horton, S.J., Morrone, G., Schuringa, J.J., de Boer, J. and Williams, O. 2013. The AAA+ ATPase RUVBL2 is a critical mediator of MLL-AF9 oncogenesis. *Leukemia* 27: 1461-1468.
- Hong, S., Jo, J., Kim, H.J., Lee, J.E., Shin, D.H., Lee, S.G., Baek, A., Shim, S.H. and Lee, D.R. 2016. RuvB-like protein 2 (Ruvbl2) has a role in directing the neuroectodermal differentiation of mouse embryonic stem cells. *Stem Cells Dev.* 25: 1376-1385.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.