SANTA CRUZ BIOTECHNOLOGY, INC.

Pontin 52 (H-4): sc-365339

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The Power to Question

BACKGROUND

Pontin 52 is nuclear matrix protein that is primarily expressed in the nucleus and is also present in the cytoplasm. Pontin 52 is expressed in the nucleoplasm of whole cells, but is not present in the nucleoli. Pontin 52 is also designated RUVBL1, for *E. coli* RuvB-like 1 protein, or NMP 238, and 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. The gene encoding human Pontin 52 maps to chromosome 3q21.3.

REFERENCES

1. Bauer, A., et al. 1998. Pontin 52, an interaction partner of β-catenin, binds to the TATA box-binding protein. Proc. Natl. Acad. Sci. USA 95: 14787-14792.
2. 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.
3. Holzmann, K., et al. 1998. Identification and characterization of the ubiquitously occurring nuclear matrix protein NMP 238. Biochem. Biophys. Res. Commun. 252: 39-45.
4. Qiu, X.B., et al. 1998. An eukaryotic RuvB-like protein (RuvBL1) essential for growth. J. Biol. Chem. 273: 27786-27793.
5. Lim, C.R., et al. 2000. The *Saccharomyces cerevisiae* RuvB-like protein, Tih2p, is required for cell cycle progression and RNA polymerase II-directed transcription. J. Biol. Chem. 275: 22409-22417.
6. 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: RUVBL1 (human) mapping to 3q21.3; Ruvbl1 (mouse) mapping to 6 D1.

SOURCE

Pontin 52 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 123-153 within an internal region of Pontin 52 of human origin.

PRODUCT

Each vial contains 200 µg IgM 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-365339 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-365339 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pontin 52 (H-4) is recommended for detection of Pontin 52 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).

Pontin 52 (H-4) is also recommended for detection of Pontin 52 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Pontin 52 siRNA (h): sc-43543, Pontin 52 siRNA (m): sc-60010, Pontin 52 shRNA Plasmid (h): sc-43543-SH, Pontin 52 shRNA Plasmid (m): sc-60010-SH, Pontin 52 shRNA (h) Lentiviral Particles: sc-43543-V and Pontin 52 shRNA (m) Lentiviral Particles: sc-60010-V.

Pontin 52 (H-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

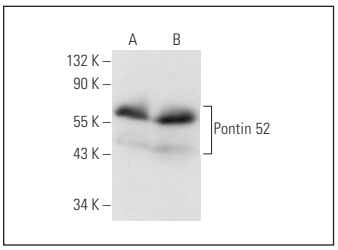
Molecular Weight of Pontin 52: 50 kDa.

Positive Controls: SK-BR-3 nuclear extract: sc-2134, K-562 nuclear extract: sc-2130 or KNRK nuclear extract: sc-2141.

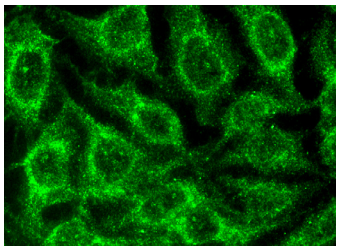
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



Pontin 52 (H-4): sc-365339. Western blot analysis of Pontin 52 expression in KNRK (**A**) and K-562 (**B**) nuclear extracts.



Pontin 52 (H-4): sc-365339. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

STORAGE

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

RESEARCH USE

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