



Pontin 52 (h2): 293T Lysate: sc-175102

BACKGROUND

Pontin 52 is a 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.
7. Carlson, M.L., et al. 2003. Regulation of COX-2 transcription in a colon cancer cell line by Pontin52/TIP49a. *Mol. Cancer* 2: 42.
8. Gartner, W., et al. 2003. The ATP-dependent helicase RUVBL1/TIP49a associates with tubulin during mitosis. *Cell Motil. Cytoskeleton* 56: 79-93.

CHROMOSOMAL LOCATION

Genetic locus: RUVBL1 (human) mapping to 3q21.3.

PRODUCT

Pontin 52 (h2): 293T Lysate represents a lysate of human Pontin 52 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Pontin 52 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Pontin 52 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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