

Pontin 52 (A-11): sc-393905

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. 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: RUVBL1 (human) mapping to 3q21.3; Ruvbl1 (mouse) mapping to 6 D1.

SOURCE

Pontin 52 (A-11) is a mouse monoclonal antibody raised against amino acids 191-290 mapping within an internal region of Pontin 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-393905 X, 200 μ g/0.1 ml.

Pontin 52 (A-11) is available conjugated to agarose (sc-393905 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393905 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393905 PE), fluorescein (sc-393905 FITC), Alexa Fluor® 488 (sc-393905 AF488), Alexa Fluor® 546 (sc-393905 AF546), Alexa Fluor® 594 (sc-393905 AF594) or Alexa Fluor® 647 (sc-393905 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393905 AF680) or Alexa Fluor® 790 (sc-393905 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Pontin 52 (A-11) 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 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).

Pontin 52 (A-11) is also recommended for detection of Pontin 52 in additional species, including equine, canine, bovine and avian.

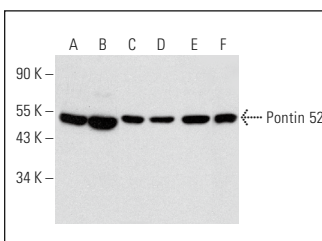
Suitable for use as control antibody for Pontin 52 siRNA (h): sc-43543, Pontin 52 siRNA (m): sc-60010, Pontin 52 shRNA Plasmid (h): sc-43543-SH, Pontin 52 shRNA Plasmid (m): sc-60010-SH, Pontin 52 shRNA (h) Lentiviral Particles: sc-43543-V and Pontin 52 shRNA (m) Lentiviral Particles: sc-60010-V.

Pontin 52 (A-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

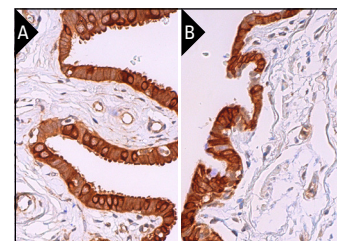
Molecular Weight of Pontin 52: 50 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HT-1080 whole cell lysate: sc-364183 or RAT2 whole cell lysate: sc-364198.

DATA



Pontin 52 (A-11): sc-393905. Western blot analysis of Pontin 52 expression in Jurkat (A), HT-1080 (B), BW5147 (C), RAT2 (D) and H19-7/IGF-IR (E) whole cell lysates and NIH/3T3 nuclear extract (F).



Pontin 52 (A-11): sc-393905. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tissue showing nuclear and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing nuclear and cytoplasmic staining of respiratory epithelial cells (B).

SELECT PRODUCT CITATIONS

1. Song, H., et al. 2020. Isoform-specific lysine methylation of ROR α 2 by SETD7 is required for association of the TIP60 coactivator complex in prostate cancer progression. *Int. J. Mol. Sci.* 21: 1622.
2. Wang, H., et al. 2022. The transcriptional coactivator RUVBL2 regulates Pol II clustering with diverse transcription factors. *Nat. Commun.* 13: 5703.
3. Zhang, X., et al. 2023. Dysregulation and oncogenic activities of ubiquitin specific peptidase 2a in the pathogenesis of hepatocellular carcinoma. *Am. J. Cancer Res.* 13: 2392-2409.

RESEARCH USE

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