SANTA CRUZ BIOTECHNOLOGY, INC.

p54/nrb (F-5): sc-376804

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Found in both primary and transformed human cells, paraspeckles are discrete bodies in the interchromatin nucleoplasmic space which contain p54/nrb (nuclear RNA-binding protein) and at least two other RNA-binding proteins, paraspeckle protein 1 (PSP1) and paraspeckle protein 2 (PSP2). Paraspeckles often co-localize with splicing speckles, which are the site of splicing factor accumulation. Paraspeckle proteins, including p54/nrb, move dynamically between the nucleolus and paraspeckles and translocate to distinct caps in the nucleolar periphery when transcription is inhibited. Originally purified from HeLa cells, the nuclear p54/nrb has two RNA recognition motifs and shares extensive homology with both the human splicing factor PSF and *Drosophila* NONA/BJ6, which is required for normal vision and courtship. The shared domain between these proteins is termed a DBHS *(Drosophila* behavior, human splicing) domain and may play a role in regulating various pathways at the level of pre-mRNA splicing.

REFERENCES

1. Dong, B., et al. 1993. Purification and cDNA cloning of HeLa cell p54/nrb, a nuclear protein with two RNA recognition motifs and extensive homology to human splicing factor PSF and *Drosophila* NONA/BJ6. Nucleic Acids Res. 21: 4085-4092.
2. Brown, C.J., et al. 1997. Expression of genes from the human active and inactive X chromosomes. Am. J. Hum. Genet. 60: 1333-1343.
3. Zhang, Z., et al. 2001. The fate of dsRNA in the nucleus: a $p54^{nrb}$-containing complex mediates the nuclear retention of promiscuously A-to-I edited RNAs. Cell 106: 465-475.
4. Fox, A.H., et al. 2002. Paraspeckles: a novel nuclear domain. Curr. Biol. 12: 13-25.

CHROMOSOMAL LOCATION

Genetic locus: NONO (human) mapping to Xq13.1; Nono (mouse) mapping to X D.

SOURCE

p54/nrb (F-5) is a mouse monoclonal antibody raised against amino acids 381-465 mapping near the C-terminus of p54/nrb of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-376804 X, 200 µg/0.1 ml.

p54/nrb (F-5) is available conjugated to agarose (sc-376804 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376804 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376804 PE), fluorescein (sc-376804 FITC), Alexa Fluor® 488 (sc-376804 AF488), Alexa Fluor® 546 (sc-376804 AF546), Alexa Fluor® 594 (sc-376804 AF594) or Alexa Fluor® 647 (sc-376804 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376804 AF680) or Alexa Fluor® 790 (sc-376804 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

p54/nrb (F-5) is recommended for detection of p54/nrb 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), 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).

p54/nrb (F-5) is also recommended for detection of p54/nrb in additional species, including equine, canine, bovine and porcine.

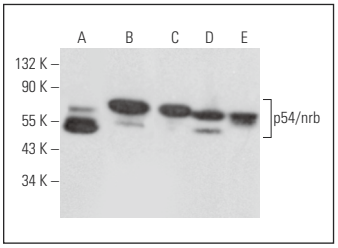
Suitable for use as control antibody for p54/nrb siRNA (h): sc-38163, p54/nrb siRNA (m): sc-38164, p54/nrb shRNA Plasmid (h): sc-38163-SH, p54/nrb shRNA Plasmid (m): sc-38164-SH, p54/nrb shRNA (h) Lentiviral Particles: sc-38163-V and p54/nrb shRNA (m) Lentiviral Particles: sc-38164-V.

p54/nrb (F-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

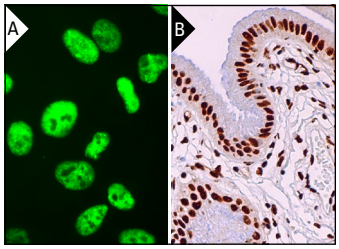
Molecular Weight of p54/nrb: 54 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, A-673 nuclear extract: sc-2128 or Jurkat whole cell lysate: sc-2204.

DATA



p54/nrb (F-5): sc-376804. Western blot analysis of p54/nrb expression in Jurkat whole cell lysate (**A**) and HeLa (**B**), MCF7 (**C**), PC-3 (**D**) and A-673 (**E**) nuclear extracts.



p54/nrb (F-5): sc-376804. Immunofluorescence staining of formalin-fixed Hela cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Dumbovic, G., et al. 2018. A novel long non-coding RNA from NBL2 pericentromeric macrosatellite forms a perinucleolar aggregate structure in colon cancer. Nucleic Acids Res. 46: 5504-5524.

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.

PROTOCOLS

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