SANTA CRUZ BIOTECHNOLOGY, INC.

p54/nrb (A-11): sc-166702

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 p54nrb, 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.

CHROMOSOMAL LOCATION

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

SOURCE

p54/nrb (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 370-405 near the C-terminus of p54/nrb of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-166702 X, 200 µg/0.1 ml.

p54/nrb (A-11) is available conjugated to agarose (sc-166702 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166702 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166702 PE), fluorescein (sc-166702 FITC), Alexa Fluor® 488 (sc-166702 AF488), Alexa Fluor® 546 (sc-166702 AF546), Alexa Fluor® 594 (sc-166702 AF594) or Alexa Fluor® 647 (sc-166702 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166702 AF680) or Alexa Fluor® 790 (sc-166702 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166702 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

p54/nrb (A-11) 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 (A-11) is also recommended for detection of p54/nrb in additional species, including equine, canine, bovine and porcine.

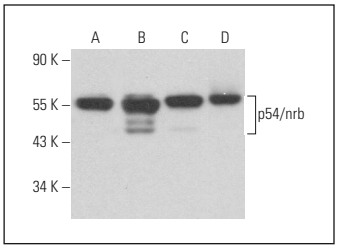
Suitable for use as control antibody for p54/nrb siRNA (h): sc-38163, p54/nrb siRNA (m): sc-38164, p54/nrb shRNA Plasmid (h): sc-38163-SH, p54/nrb shRNA Plasmid (m): sc-38164-SH, p54/nrb shRNA (h) Lentiviral Particles: sc-38163-V and p54/nrb shRNA (m) Lentiviral Particles: sc-38164-V.

p54/nrb (A-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

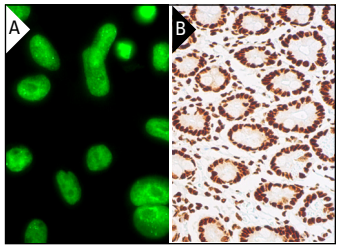
Molecular Weight of p54/nrb: 54 kDa.

Positive Controls: F9 cell lysate: sc-2245, MCF7 nuclear extract: sc-2149 or A-10 cell lysate: sc-3806.

DATA



p54/nrb (A-11): sc-166702. Western blot analysis of p54/nrb expression in MCF7 nuclear extract (**A**), F9 (**B**) and A-10 (**C**) whole cell lysates and rat ovary tissue extract (**D**).



p54/nrb (A-11) Alexa Fluor® 488: sc-166702 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). p54/nrb (A-11): sc-166702. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Jiang, L., et al. 2017. NEAT1 scaffolds RNA-binding proteins and the Microprocessor to globally enhance pri-miRNA processing. Nat. Struct. Mol. Biol. 24: 816-824.
2. Chen, L., et al. 2017. R-ChIP using inactive RNase H reveals dynamic coupling of R-loops with transcriptional pausing at gene promoters. Mol. Cell 68: 745-757.e5.

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.