SANTA CRUZ BIOTECHNOLOGY, INC.

p54/nrb (G-1): sc-376865

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.

REFERENCE

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.

CHROMOSOMAL LOCATION

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

SOURCE

p54/nrb (G-1) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p54/nrb (G-1) is available conjugated to agarose (sc-376865 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376865 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376865 PE), fluorescein (sc-376865 FITC), Alexa Fluor® 488 (sc-376865 AF488), Alexa Fluor® 546 (sc-376865 AF546), Alexa Fluor® 594 (sc-376865 AF594) or Alexa Fluor® 647 (sc-376865 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376865 AF680) or Alexa Fluor® 790 (sc-376865 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

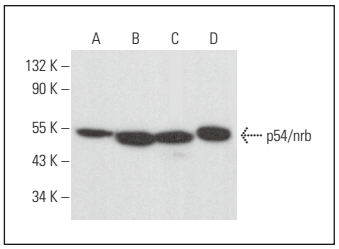
APPLICATIONS

p54/nrb (G-1) 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 (G-1) is also recommended for detection of p54/nrb in additional species, including equine, canine, bovine and porcine.

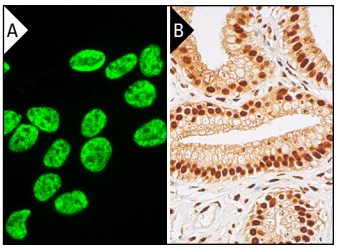
Suitable for use as control antibody for p54/nrb siRNA (h): sc-38163, p54/nrb siRNA (m): sc-38164, p54/nrb shRNA Plasmid (h): sc-38163-SH, p54/nrb shRNA Plasmid (m): sc-38164-SH, p54/nrb shRNA (h) Lentiviral Particles: sc-38163-V and p54/nrb shRNA (m) Lentiviral Particles: sc-38164-V.

Molecular Weight of p54/nrb: 54 kDa.

DATA



p54/nrb (G-1): sc-376865. Western blot analysis of p54/nrb expression in RAW 264.7 (**A**), NTERA-2 cl.D1 (**B**) and A-10 (**C**) whole cell lysates and WEHI-231 nuclear extract (**D**).



p54/nrb (G-1): sc-376865. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Shen, W., et al. 2015. 2'-fluoro-modified phosphorothioate oligonucleotide can cause rapid degradation of p54/nrb and PSF. Nucleic Acids Res. 43: 4569-4578.
2. Liang, X.H., et al. 2018. Translation can affect the antisense activity of RNase H1-dependent oligonucleotides targeting mRNAs. Nucleic Acids Res. 46: 293-313.
3. Kumarasinghe, N. and Moss, W.N. 2019. Analysis of a structured intronic region of the LMP2 pre-mRNA from EBV reveals associations with human regulatory proteins and nuclear Actin. BMC Res. Notes 12: 33.
4. Ostergaard, M.E., et al. 2020. Understanding the effect of controlling phosphorothioate chirality in the DNA gap on the potency and safety of gapmer antisense oligonucleotides. Nucleic Acids Res. 48: 1691-1700.
5. Vasquez, G., et al. 2021. Site-specific incorporation of 5'-methyl DNA enhances the therapeutic profile of gapmer ASOs. Nucleic Acids Res. 49: 1828-1839.

RESEARCH USE

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