

NDH II (R-16): sc-46422

BACKGROUND

Pre-mRNA splicing is a critical step in the posttranscriptional regulation of gene expression. Several protein complexes are involved in proper mRNA splicing and transport. The small nuclear ribonucleoprotein particles (snRNPs) interact with the SRm160/300 splicing coactivator complex to form a large RNA spliceosome. The heterogeneous nuclear ribonucleoproteins (hnRNPs) contribute to the processing and transport of pre-mRNA within the spliceosome. Also, the exon junction complex (EJC), which includes Y14, Aly/REF, and MAGOH, mediates mRNA export, cytoplasmic localization, and nonsense-mediated mRNA decay. The effect on pre-mRNA splicing involves a nuclear complex (CBC). CBC consists of two cap binding proteins, CBP20 and CBP80, which mediate the stimulatory functions of the cap in pre-mRNA splicing, 3'-end formation, and U snRNA export. The splicing factor 1 is a nuclear protein that binds the branch point sequence of pre-mRNA in the first step of spliceosome assembly. SRp55 modulates the selection of alternative splice sites in constitutive splicing and NDH II generates secondary structures that interact with RNA-binding proteins. MDA5 is an ATP-dependent RNA helicase associated with the growth, differentiation and death of human melanoma cells.

REFERENCES

1. Kang, D.C., et al. 2002. mda-5: An interferon-inducible putative RNA helicase with double-stranded RNA-dependent ATPase activity and melanoma growth-suppressive properties. *Proc. Natl. Acad. Sci. USA* 99: 637-642.
2. Zhang, S., et al. 2004. Multiple functions of nuclear DNA helicase II (RNA helicase A) in nucleic acid metabolism. *Acta Biochim. Biophys. Sin.* 36: 177-183.
3. Zhang, S., et al. 2004. Nuclear DNA helicase II (RNA helicase A) binds to an F-Actin containing shell that surrounds the nucleolus. *Exp. Cell. Res.* 293: 248-258.
4. Zhang, S., et al. 2004. DNA-dependent protein kinase (DNA-PK) phosphorylates nuclear DNA helicase II/RNA helicase A and hnRNP proteins in an RNA-dependent manner. *Nucleic Acids Res.* 32: 1-10.

CHROMOSOMAL LOCATION

Genetic locus: DHX9 (human) mapping to 1q25.3; Dhx9 (mouse) mapping to 1 G3.

SOURCE

NDH II (R-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDH II of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-46422 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-46422 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NDH II (R-16) is recommended for detection of nuclear DNA helicase II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NDH II (R-16) is also recommended for detection of nuclear DNA helicase II in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for NDH II siRNA (h): sc-45706, NDH II siRNA (m): sc-45707, NDH II shRNA Plasmid (h): sc-45706-SH, NDH II shRNA Plasmid (m): sc-45707-SH, NDH II shRNA (h) Lentiviral Particles: sc-45706-V and NDH II shRNA (m) Lentiviral Particles: sc-45707-V.

NDH II (R-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NDH II: 130 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.


 MONOS
 Satisfation
 Guaranteed

Try **NDH II (B-9): sc-137232** or **NDH II (B-5): sc-137198**, our highly recommended monoclonal alternatives to NDH II (R-16).