SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP H3 (D-4): sc-376416

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription and pre-mRNA processing, as well as mature mRNA transport to the cytoplasm and translation. hnRNPs also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II. There are approximately 20 known hnRNP proteins, and their complexes are the major constituents of the spliceosome. The majority of hnRNP proteins are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. hnRNPs F and H are highly related factors that preferentially associate with poly(rG) regions on RNA. hnRNP H3, also known as hnRNP 2H9, is a 346 amino acid protein involved in RNA processing, as well as early heat shock-inducing splicing arrest. hnRNP H3 contains two RNA recognition motif (RRM) domains, which include locations for binding single-stranded RNA. hnRNP H3 is expressed as six isoforms generated by alternative splicing of the pre-mRNA.

REFERENCES

1. Mahe, D., et al. 1997. Cloning of human 2H9 heterogeneous nuclear ribonucleoproteins. Relation with splicing and early heat shock-induced splicing arrest. J. Biol. Chem. 272: 1827-1836.
2. Honore, B. 2000. The hnRNP 2H9 gene, which is involved in the splicing reaction, is a multiply spliced gene. Biochim. Biophys. Acta 1492: 108-119.
3. Mahe, D., et al. 2000. Spatiotemporal regulation of hnRNP M and 2H9 gene expression during mouse embryonic development. Biochim. Biophys. Acta 1492: 414-424.

CHROMOSOMAL LOCATION

Genetic locus: HNRNPH3 (human) mapping to 10q21.3; Hnrnph3 (mouse) mapping to 10 B4.

SOURCE

hnRNP H3 (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 155-185 within an internal region of hnRNP H3 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.

hnRNP H3 (D-4) is available conjugated to agarose (sc-376416 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376416 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376416 PE), fluorescein (sc-376416 FITC), Alexa Fluor® 488 (sc-376416 AF488), Alexa Fluor® 546 (sc-376416 AF546), Alexa Fluor® 594 (sc-376416 AF594) or Alexa Fluor® 647 (sc-376416 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376416 AF680) or Alexa Fluor® 790 (sc-376416 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376416 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

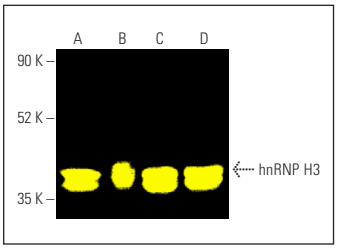
hnRNP H3 (D-4) is recommended for detection of hnRNP H3 isoforms 1, 2, 3, 4, 5 and 6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting 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).

Suitable for use as control antibody for hnRNP H3 siRNA (h): sc-90762, hnRNP H3 siRNA (m): sc-146063, hnRNP H3 shRNA Plasmid (h): sc-90762-SH, hnRNP H3 shRNA Plasmid (m): sc-146063-SH, hnRNP H3 shRNA (h) Lentiviral Particles: sc-90762-V and hnRNP H3 shRNA (m) Lentiviral Particles: sc-146063-V.

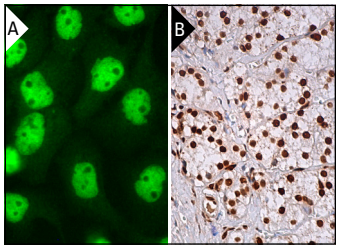
Molecular Weight of hnRNP H3: 37 kDa.

Positive Controls: BJAB nuclear extract: sc-2145, Raji whole cell lysate: sc-364236 or K-562 nuclear extract: sc-2130.

DATA



hnRNP H3 (D-4): sc-376416. Fluorescent western blot analysis of hnRNP H3 expression in Raji whole cell lysate (**A**) and BJAB (**B**), K562 (**C**) and Ramos (**D**) nuclear extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 488: sc-516176.



hnRNP H3 (D-4): sc-376416. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Rust, H.L., et al. 2014. Using unnatural amino acid mutagenesis to probe the regulation of PRMT1. ACS Chem. Biol. 9: 649-655.
2. Maniaci, M., et al. 2021. Systematic analysis of the impact of R-methylation on RBPs-RNA interactions: a proteomic approach. Front. Mol. Biosci. 8: 688973.

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.