SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP H (N-16): sc-10042

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to pre-mRNA processing and transport, and also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II. hnRNP complexes are the major constituents of the spliceosome and in particular, the hnRNP A1 protein is one of the major pre-mRNA/mRNA binding proteins and also one of the most abundant proteins in the nucleus. hnRNP A1 and A2/B1 regulate the processing of pre-mRNA by directly antagonizing the association of various splicing factors and by influencing the splice site selection on pre-mRNA. The majority of hnRNP proteins components are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. Most hnRNP proteins, including hnRNP C1 and C2, contain one or more RNA binding domains and are implicated in the processing of pre-mRNA. hnRNPs F and H are largely related factors that preferentially associate with poly(rG) regions on RNA. Isoforms of these proteins are often generated by alternative processing of the pre-mRNA and by posttranslational modifications such as phosphorylation on serines and threonines and methylation of arginines.

CHROMOSOMAL LOCATION

Genetic locus: HNRNPH1 (human) mapping to 5q35.3, HNRNPH2 (human) mapping to Xq22.1; Hnrnph1 (mouse) mapping to 11 B1.3, Hnrph2 (mouse) mapping to X E3.

SOURCE

hnRNP H (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of hnRNP H 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.

Blocking peptide available for competition studies, sc-10042 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

hnRNP H (N-16) is recommended for detection of hnRNP H and hnRNP H' of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

hnRNP H (N-16) is also recommended for detection of hnRNP H and hnRNP H' in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of hnRNP H: 48 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, NIH/3T3 whole cell lysate: sc-2210 or Hep G2 cell lysate: sc-2227.

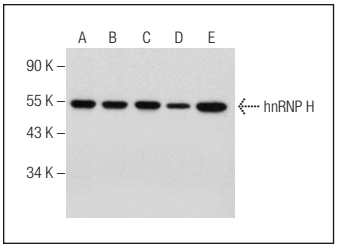
STORAGE

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

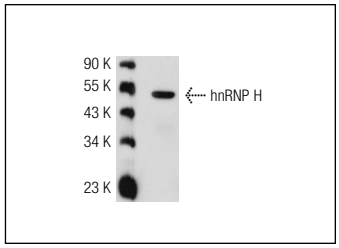
RESEARCH USE

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

DATA



hnRNP H (N-16): sc-10042. Western blot analysis of hnRNP H expression in K-562 (**A**), NIH/3T3 (**B**), Hep G2 (**C**), MCF7 (**D**) and HEK293 (**E**) whole cell lysates.



hnRNP H (N-16): sc-10042. Western blot analysis of hnRNP H expression in BYDP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Oberg, D., et al. 2005. A downstream polyadenylation element in human papillomavirus type 16 L2 encodes multiple GGG motifs and interacts with hnRNP H. J. Virol. 79: 9254-9269.
2. Fay, J., et al. 2009. Increased expression of cellular RNA-binding proteins in HPV-induced neoplasia and cervical cancer. J. Med. Virol. 81: 897-907.
3. Young, C., et al. 2009. The algal metabolite yessotoxin affects heterogeneous nuclear ribonucleoproteins in Hep G2 cells. Proteomics 9: 2529-2542.
4. Fox, J.T., et al. 2009. Mechanism of the internal ribosome entry site-mediated translation of serine hydroxymethyltransferase 1. J. Biol. Chem. 284: 31085-31096.
5. Doktor, T.K., et al. 2010. SMN2 exon 7 splicing is inhibited by binding of hnRNP A1 to a common ESS motif that spans the 3' splice site. Hum. Mutat. 32: 220-230.
6. Dobrowolski, S.F., et al. 2010. The phenylalanine hydroxylase c.30C>G synonymous variation (p.G10G) creates a common exonic splicing silencer. Mol. Genet. Metab. 100: 316-323.
7. Culler, S.J., et al. 2010. Functional selection and systematic analysis of intronic splicing elements identify active sequence motifs and associated splicing factors. Nucleic Acids Res. 38: 5152-5165.
8. Doktor, T.K., et al. 2010. SMN2 exon 7 splicing is inhibited by binding of hnRNP A1 to a common ESS motif that spans the 3' splice site. Hum. Mutat. 32: 220-230.
8. Russo, A., et al. 2011. Autoregulatory circuit of human rpL3 expression requires hnRNP H1, NPM and KHSRP. Nucleic Acids Res. 39: 7576-7585.