SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP F/H (B-10): sc-390048

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Swanson, M.S., et al. 1987. Primary structure of human nuclear ribonucleoprotein particle C proteins. Mol. Cell. Biol. 7: 1731-1739.
2. Gorlach, M., et al. 1994. The determinants of RNA-binding specificity of the heterogeneous nuclear ribonucleoprotein C proteins. J. Biol. Chem. 269: 23074-23078.
3. Honore, B., et al. 1995. Heterogeneous nuclear ribonucleoproteins H, H', and F are members of a ubiquitously expressed subfamily of related but distinct proteins encoded by genes mapping to different chromosomes. J. Biol. Chem. 270: 28780-28789.
4. Badolato, J., et al. 1995. Identification and characterization of a novel human RNA-binding protein. Gene 166: 323-327.
5. Siomi, H., et al. 1995. A nuclear localization domain in the hnRNP A1 protein. J. Cell Biol. 129: 551-560.
6. Hanamura, A., et al. 1998. Regulated tissue-specific expression of antagonistic pre-mRNA splicing factors. RNA 4: 430-444.
7. Melcak, I., et al. 2000. Nuclear pre-mRNA compartmentalization: trafficking of released transcripts to splicing factor reservoirs. Mol. Biol. Cell 11: 497-510.

SOURCE

hnRNP F/H (B-10) is a mouse monoclonal antibody raised against amino acids 1-300 of hnRNP F/H 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.

RESEARCH USE

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

APPLICATIONS

hnRNP F/H (B-10) is recommended for detection of hnRNP F, hnRNP H1 and hnRNP H' 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

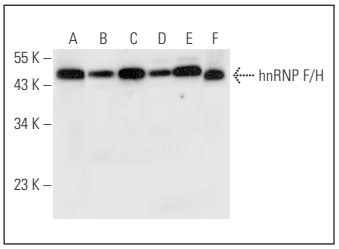
Molecular Weight of hnRNP F/H: 48 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa whole cell lysate: sc-2200 or DU 145 cell lysate: sc-2268.

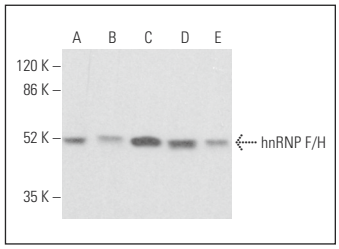
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



hnRNP F/H (B-10): sc-390048. Western blot analysis of hnRNP F/H expression in HeLa (**A**), Hep G2 (**B**), Jurkat (**C**), A-375 (**D**) and DU 145 (**E**) whole cell lysates and K-562 nuclear extract (**F**).



hnRNP F/H (B-10): sc-390048. Western blot analysis of hnRNP F/H expression in Jurkat nuclear extract (**A**) and NIH/3T3 (**B**), MCF7 (**C**), HEK293 (**D**) and NCI-H292 (**E**) whole cell lysates.

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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.