



hnRNP A2/B1 (4H10): sc-80993

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. They 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. The A/B subfamily of hnRNPs include A1, A2/B1, A3 and A0, and in *Xenopus*, hnRNP A1, A2 and A3 are ubiquitously expressed throughout development as well as in adult tissues. 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 hnRNP A0 gene is distinct from the other A/B family members, and it encodes a low-abundance protein, which is implicated in mRNA stability.

REFERENCES

- Good, P. J., et al. 1993. Three new members of the RNP protein family in *Xenopus*. *Nucleic Acids Res.* 21: 999-1006.
- Badolato, J., et al. 1995. Identification and characterisation of a novel human RNA-binding protein. *Gene* 166: 323-327.
- Siomi, H., et al. 1995. A nuclear localization domain in the hnRNP A1 protein. *J. Cell Biol.* 129: 551-560.
- Myer, V.E., et al. 1995. Isolation and characterization of a novel, low abundance hnRNP protein: A0. *RNA* 1: 171-182.
- Hanamura, A., et al. 1998. Regulated tissue-specific expression of antagonistic pre-mRNA splicing factors. *RNA* 4: 430-444.
- Melcak, I., et al. 2000. Nuclear pre-mRNA compartmentalization: trafficking of released transcripts to splicing factor reservoirs. *Mol. Biol. Cell* 11: 497-510.

CHROMOSOMAL LOCATION

Genetic locus: HNRPA2B1 (human) mapping to 7p15.2.

SOURCE

hnRNP A2/B1 (4H10) is a mouse monoclonal antibody raised against hnRNP A2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

hnRNP A2/B1 (4H10) is available conjugated to either phycoerythrin (sc-80993 PE) or fluorescein (sc-80993 FITC), 200 µg/ml, for IF, IHC(P) 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

hnRNP A2/B1 (4H10) is recommended for detection of hnRNP A2/B1 of 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)] and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for hnRNP A2/B1 siRNA (h): sc-43841, hnRNP A2/B1 shRNA Plasmid (h): sc-43841-SH and hnRNP A2/B1 shRNA (h) Lentiviral Particles: sc-43841-V.

Molecular Weight of hnRNP A2: 36 kDa.

Molecular Weight of hnRNP B1: 38 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or MEG-01 nuclear extract: sc-2150.

SELECT PRODUCT CITATIONS

- Ma, K.W., et al. 2009. Over-expression of SUMO-1 induces the up-regulation of heterogeneous nuclear ribonucleoprotein A2/B1 isoform B1 (hnRNP A2/B1 isoform B1) and uracil DNA glycosylase (UDG) in hepG2 cells. *Cell Biochem. Funct.* 27: 228-237.

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.



See **hnRNP A2/B1 (B-7): sc-374053** for hnRNP A2/B1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.