

hnRNP A2/B1 (B-7): sc-374053

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.

CHROMOSOMAL LOCATION

Genetic locus: HNRNPA2B1 (human) mapping to 7p15.2; Hnrnpa2b1 (mouse) mapping to 6 B3.

SOURCE

hnRNP A2/B1 (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 209-243 within an internal region of hnRNP A2/B1 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.

hnRNP A2/B1 (B-7) is available conjugated to agarose (sc-374053 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374053 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374053 PE), fluorescein (sc-374053 FITC), Alexa Fluor[®] 488 (sc-374053 AF488), Alexa Fluor[®] 546 (sc-374053 AF546), Alexa Fluor[®] 594 (sc-374053 AF594) or Alexa Fluor[®] 647 (sc-374053 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374053 AF680) or Alexa Fluor[®] 790 (sc-374053 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374053 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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.

APPLICATIONS

hnRNP A2/B1 (B-7) is recommended for detection of hnRNP A2/B1 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).

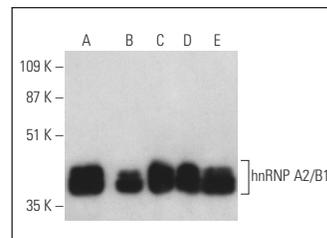
hnRNP A2/B1 (B-7) is also recommended for detection of hnRNP A2/B1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for hnRNP A2/B1 siRNA (h): sc-43841, hnRNP A2/B1 siRNA (m): sc-43842, hnRNP A2/B1 shRNA Plasmid (h): sc-43841-SH, hnRNP A2/B1 shRNA Plasmid (m): sc-43842-SH, hnRNP A2/B1 shRNA (h) Lentiviral Particles: sc-43841-V and hnRNP A2/B1 shRNA (m) Lentiviral Particles: sc-43842-V.

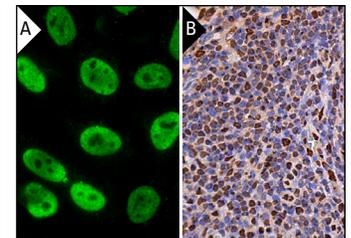
Molecular Weight of hnRNP A2/B1: 36/38 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, HeLa nuclear extract: sc-2120 or MEG-01 nuclear extract: sc-2150.

DATA



hnRNP A2/B1 (B-7) HRP: sc-374053 HRP. Direct western blot analysis of hnRNP A2/B1 expression in K-562 (A), HeLa (B), MEG-01 (C), MOLT-4 (D) and Jurkat (E) nuclear extracts.



hnRNP A2/B1 (B-7): sc-374053. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (B).

SELECT PRODUCT CITATIONS

- Brandi, J., et al. 2016. The antioxidant uncoupling protein 2 stimulates hnRNP A2/B1, Glut1 and PKM2 expression and sensitizes pancreas cancer cells to glycolysis inhibition. *Free Radic. Biol. Med.* 101: 305-316.
- Suzuki, H., et al. 2019. C9-ALS/FTD-linked proline-arginine dipeptide repeat protein associates with paraspeckle components and increases paraspeckle formation. *Cell Death Dis.* 10: 746.
- Kutluay, S.B., et al. 2019. Genome-wide analysis of heterogeneous nuclear ribonucleoprotein (hnRNP) binding to HIV-1 RNA reveals a key role for hnRNP H1 in alternative viral mRNA splicing. *J. Virol.* 93: e01048-19.
- Wang, L., et al. 2019. Nuclear hnRNP A2/B1 initiates and amplifies the innate immune response to DNA viruses. *Science* 365: eaav0758.

RESEARCH USE

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