

# hnRNP A2/B1 (E-2): sc-374052

## 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 (E-2) 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<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374052 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

hnRNP A2/B1 (E-2) 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 (E-2) 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.

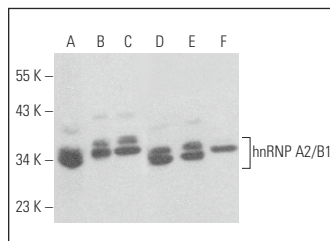
Molecular Weight of hnRNP A2/B1: 36/38 kDa.

Positive Controls: K-562 nuclear extract: sc-2130.

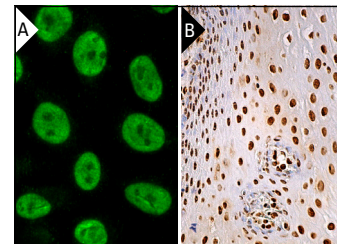
## STORAGE

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

## DATA



hnRNP A2/B1 (E-2): sc-374052. Western blot analysis of hnRNP A2/B1 expression in K-562 (A), HL-60 (B) and MCF7 (C) nuclear extracts and A549 (D), MEG-01 (E) and NIH/3T3 (F) whole cell lysates.



hnRNP A2/B1 (E-2): 374052. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing nuclear staining of squamous epithelial cells (B).

## SELECT PRODUCT CITATIONS

- Katz, Y., et al. 2014. Musashi proteins are post-transcriptional regulators of the epithelial-luminal cell state. *Elife* 3: e03915.
- Xu, J., et al. 2014. A heroin addiction severity-associated intronic single nucleotide polymorphism modulates alternative pre-mRNA splicing of the  $\mu$  opioid receptor gene OPRM1 via hnRNPH interactions. *J. Neurosci.* 34: 11048-11066.
- Davidson, Y.S., et al. 2017. Heterogeneous ribonuclear protein A3 (hnRNP A3) is present in dipeptide repeat protein containing inclusions in frontotemporal lobar degeneration and motor neurone disease associated with expansions in C9orf72 gene. *Acta Neuropathol. Commun.* 5: 31.
- Tsai, P.F., et al. 2018. A muscle-specific enhancer RNA mediates cohesin recruitment and regulates transcription in *trans*. *Mol. Cell* 71: 129-141.e8.
- Wang, H., et al. 2018. Long noncoding RNA miR503HG, a prognostic indicator, inhibits tumor metastasis by regulating the HNRNPA2B1/NF- $\kappa$ B pathway in hepatocellular carcinoma. *Theranostics* 8: 2814-2829.
- Halleger, M., et al. 2021. TDP-43 condensation properties specify its RNA-binding and regulatory repertoire. *Cell* 184: 4680-4696.e22.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://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.