

hnRNP A1 (D-4): sc-374526

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 components are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. hnRNP I, also designated polypyrimidine tract-binding protein (PTB), and its homolog hnRNP L bind to the 3' end of introns to modulate alternative splicing mechanisms of pre-mRNAs in normal cells and the translation of several viruses, including hepatitis C virus (HCV). The human hnRNP I gene maps to chromosome 19p13.13 and encodes a protein that is localized in the nucleoplasm. hnRNP L, like hnRNP I, is also localized in the nucleoplasm.

CHROMOSOMAL LOCATION

Genetic locus: HNRNPA1 (human) mapping to 12q13.13; Hnrnp1 (mouse) mapping to 15 F3.

SOURCE

hnRNP A1 (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 175-211 within an internal of hnRNP A1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-374526 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-374526 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

hnRNP A1 (D-4) is recommended for detection of hnRNP A1 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).

Suitable for use as control antibody for hnRNP A1 siRNA (h2): sc-270345, hnRNP A1 siRNA (m): sc-35576, hnRNP A1 shRNA Plasmid (h2): sc-270345-SH, hnRNP A1 shRNA Plasmid (m): sc-35576-SH, hnRNP A1 shRNA (h2) Lentiviral Particles: sc-270345-V and hnRNP A1 shRNA (m) Lentiviral Particles: sc-35576-V.

hnRNP A1 (D-4) X TransCruz antibody is recommended for ChIP assays.

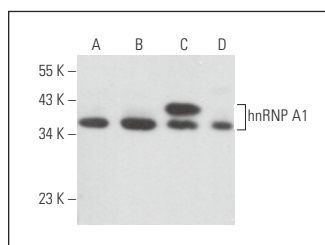
Molecular Weight of hnRNP A1 isoforms: 29/34/39 kDa.

Positive Controls: MCF7 nuclear extract: sc-2149, HeLa nuclear extract: sc-2120 or K-562 nuclear extract: sc-2130.

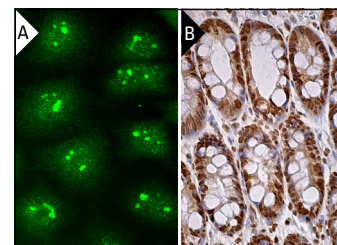
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



hnRNP A1 (D-4): sc-374526. Western blot analysis of hnRNP A1 expression in HeLa (A), K-562 (B), KNRK (C) and MCF7 (D) nuclear extracts.



hnRNP A1 (D-4): sc-374526. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- 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.
- Ma, W. and Mayr, C. 2018. A membraneless organelle associated with the endoplasmic reticulum enables 3'UTR-mediated protein-protein interactions. *Cell* 175: 1492-1506.e19.
- Lee, S.H. and Mayr, C. 2019. Gain of additional BIRC3 protein functions through 3'-UTR-mediated protein complex formation. *Mol. Cell* 74: 701-712.e9.

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.



See **hnRNP A1 (4B10): sc-32301** for hnRNP A1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.