

hnRNP A2/B1 (DP3B3): sc-32316

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.

REFERENCE

1. Good, P. J., et al. 1993. Three new members of the RNP protein family in *Xenopus*. *Nucleic Acids Res.* 21: 999-1006.
2. Badolato, J., et al. 1995. Identification and characterisation of a novel human RNA-binding protein. *Gene* 166: 323-337.
3. Siomi, H., et al. 1995. A nuclear localization domain in the hnRNP A1 protein. *J. Cell Biol.* 129: 551-560.

CHROMOSOMAL LOCATION

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

SOURCE

hnRNP A2/B1 (DP3B3) is a mouse monoclonal antibody raised against bacterially expressed human His-hnRNP A2.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

hnRNP A2/B1 (DP3B3) is available conjugated to agarose (sc-32316 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32316 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32316 PE), fluorescein (sc-32316 FITC), Alexa Fluor® 488 (sc-32316 AF488), Alexa Fluor® 546 (sc-32316 AF546), Alexa Fluor® 594 (sc-32316 AF594) or Alexa Fluor® 647 (sc-32316 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32316 AF680) or Alexa Fluor® 790 (sc-32316 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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.

APPLICATIONS

hnRNP A2/B1 (DP3B3) is recommended for detection of hnRNP A2 and hnRNP B1 of mouse, rat and 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

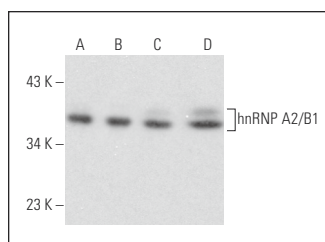
hnRNP A2/B1 (DP3B3) is also recommended for detection of hnRNP A2 and hnRNP B1 in additional species, including bovine, porcine and canine.

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.

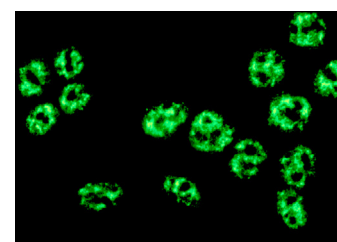
Molecular Weight of hnRNP A2/B1: 36/38 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa nuclear extract: sc-2120 or Jurkat nuclear extract: sc-2132.

DATA



hnRNP A2/B1 (DP3B3): sc-32316. Western blot analysis of hnRNP A2/B1 expression in HeLa (A) and Jurkat (B) nuclear extracts and A549 (C) and MEG-01 (D) whole cell lysates.



hnRNP A2/B1 (DP3B3): sc-32316. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Jiang, D., et al. 2008. Purification and identification of positive regulators binding to a novel element in the c-Jun promoter. *Biochemistry* 47: 9318-9334.
2. Xiao, R., et al. 2019. Pervasive chromatin-RNA binding protein interactions enable RNA-based regulation of transcription. *Cell* 178: 107-121.e18.
3. Hu, Y., et al. 2020. Ibrutinib suppresses intracellular *Mycobacterium tuberculosis* growth by inducing macrophage autophagy. *J. Infect.* 80: e19-e26.
4. Kim, H.J., et al. 2022. Heterozygous frameshift variants in HNRNPA2B1 cause early-onset oculopharyngeal muscular dystrophy. *Nat. Commun.* 13: 2306.
5. Perez-Pepe, M., et al. 2023. 7SK methylation by METTL3 promotes transcriptional activity. *Sci. Adv.* 9: eade7500.

RESEARCH USE

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