

hnRNP A2/B1 (EF-67): sc-53531

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 (EF-67) is a mouse monoclonal antibody raised against the C-terminus of hnRNP A2 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.

hnRNP A2/B1 (EF-67) is available conjugated to agarose (sc-53531 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53531 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53531 PE), fluorescein (sc-53531 FITC), Alexa Fluor® 488 (sc-53531 AF488), Alexa Fluor® 546 (sc-53531 AF546), Alexa Fluor® 594 (sc-53531 AF594) or Alexa Fluor® 647 (sc-53531 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53531 AF680) or Alexa Fluor® 790 (sc-53531 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

hnRNP A2/B1 (EF-67) is recommended for detection of hnRNP A2/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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with hnRNP A1.

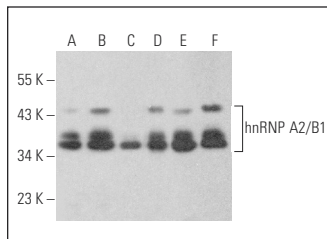
Suitable for use as control antibody for hnRNP A2/B1 siRNA (h): sc-43841, hnRNP A2/B1 siRNA (m): sc-43842, hnRNP A2/B1 shRNA Plasmid (h): sc-43841-SH, hnRNP A2/B1 shRNA Plasmid (m): sc-43842-SH, hnRNP A2/B1 shRNA (h) Lentiviral Particles: sc-43841-V and hnRNP A2/B1 shRNA (m) Lentiviral Particles: sc-43842-V.

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

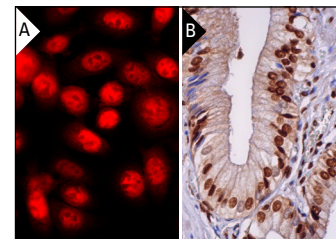
STORAGE

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 (EF-67): sc-53531. Western blot analysis of hnRNP A2/B1 expression in A549 (A), MEG-01 (B) and NIH/3T3 (C) whole cell lysates and HL-60 (D), MCF7 (E) and K-562 (F) nuclear extracts.



hnRNP A2/B1 (EF-67) Alexa Fluor® 594: sc-53531 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). hnRNP A2/B1 (EF-67): sc-53531. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Ferron, L., et al. 2008. The stargazin-related protein γ 7 interacts with the mRNA-binding protein heterogeneous nuclear ribonucleoprotein A2 and regulates the stability of specific mRNAs, including CaV2.2. *J. Neurosci.* 28: 10604-10617.
- Nyhan, M.J., et al. 2011. VHL genetic alteration in CCRCC does not determine de-regulation of HIF, CAIX, hnRNP A2/B1 and osteopontin. *Cell. Oncol.* 34: 225-234.
- Madureira, P.A., et al. 2012. Genotoxic agents promote the nuclear accumulation of annexin A2: role of annexin A2 in mitigating DNA damage. *PLoS ONE* 7: e50591.
- Kim, H.J., et al. 2013. Mutations in prion-like domains in hnRNPA2B1 and hnRNPA1 cause multisystem proteinopathy and ALS. *Nature* 495: 467-473.
- Leal, G., et al. 2014. Neuronal activity induces synaptic delivery of hnRNP A2/B1 by a BDNF-dependent mechanism in cultured hippocampal neurons. *PLoS ONE* 9: e108175.
- Chen, C.Y., et al. 2016. Heterogeneous nuclear ribonucleoproteins A1 and A2 modulate expression of Tid1 isoforms and EGFR signaling in non-small cell lung cancer. *Oncotarget* 7: 16760-16772.
- Paul, K.R., et al. 2017. Effects of mutations on the aggregation propensity of the human prion-like protein hnRNPA2B1. *Mol. Cell. Biol.* 37 pii: e00652-16.
- Guo, L., et al. 2018. Nuclear-import receptors reverse aberrant phase transitions of RNA-binding proteins with prion-like domains. *Cell* 173: 677-692.e20.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA