

hnRNP E1 (F-6): sc-393076

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription, 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 protein components are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm, such as hnRNP E1 and E2. hnRNP E1 may function in the cytoplasm as a translational regulatory protein, while hnRNP E2 stabilizes mRNA to enhance polioviral mRNA translation. hnRNP M is involved in pre-mRNA splicing and in stress-induced transient splicing arrest.

REFERENCES

1. Badolato, J., et al. 1995. Identification and characterisation of a novel human RNA-binding protein. *Gene* 166: 323-327.
2. Siomi, H. and Dreyfuss, G. 1995. A nuclear localization domain in the hnRNP A1 protein. *J. Cell Biol.* 129: 551-560.
3. Gattoni, R., et al. 1996. The human hnRNP-M proteins: structure and relation with early heat shock-induced splicing arrest and chromosome mapping. *Nucleic Acids Res.* 24: 2535-2542.
4. Ostareck, D.H., et al. 1997. mRNA silencing in erythroid differentiation: hnRNP K and hnRNP E1 regulate 15-lipoxygenase translation from the 3' end. *Cell* 89: 597-606.

CHROMOSOMAL LOCATION

Genetic locus: PCBP1 (human) mapping to 2p13.3; Pcbp1 (mouse) mapping to 6 D1.

SOURCE

hnRNP E1 (F-6) is a mouse monoclonal antibody raised against amino acids 171-280 mapping within an internal region of hnRNP E1 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 E1 (F-6) is available conjugated to agarose (sc-393076 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393076 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393076 PE), fluorescein (sc-393076 FITC), Alexa Fluor[®] 488 (sc-393076 AF488), Alexa Fluor[®] 546 (sc-393076 AF546), Alexa Fluor[®] 594 (sc-393076 AF594) or Alexa Fluor[®] 647 (sc-393076 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393076 AF680) or Alexa Fluor[®] 790 (sc-393076 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

hnRNP E1 (F-6) is recommended for detection of hnRNP E1 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); may cross react with hnRNP E2.

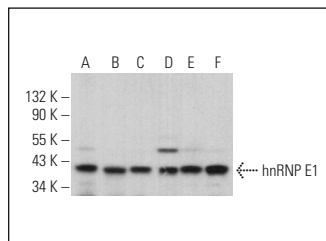
hnRNP E1 (F-6) is also recommended for detection of hnRNP E1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for hnRNP E1 siRNA (h): sc-38268, hnRNP E1 siRNA (m): sc-38269, hnRNP E1 shRNA Plasmid (h): sc-38268-SH, hnRNP E1 shRNA Plasmid (m): sc-38269-SH, hnRNP E1 shRNA (h) Lentiviral Particles: sc-38268-V and hnRNP E1 shRNA (m) Lentiviral Particles: sc-38269-V.

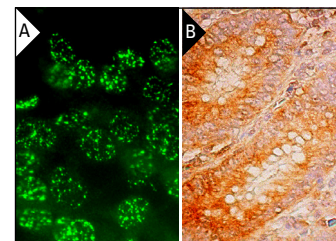
Molecular Weight of hnRNP E1: 43 kDa.

Positive Controls: L6 whole cell lysate: sc-364196, RAW 264.7 whole cell lysate: sc-2211 or C2C12 whole cell lysate: sc-364188.

DATA



hnRNP E1 (F-6): sc-393076. Western blot analysis of hnRNP E1 expression in HEL 92.1.7 (A), SK-BR-3 (B), C2C12 (C), RAW 264.7 (D), L6 (E) and A-10 (F) whole cell lysates.



hnRNP E1 (F-6): sc-393076. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing punctate nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and cytoplasmic and nuclear staining of lymphoid tissue cells (B).

SELECT PRODUCT CITATIONS

1. Vidaki, M., et al. 2017. A requirement for Mena, an Actin regulator, in local mRNA translation in developing neurons. *Neuron* 95: 608-622.
2. Grillo, A.S., et al. 2017. Restored iron transport by a small molecule promotes absorption and hemoglobinization in animals. *Science* 356: 608-616.
3. Chow, H.Y., et al. 2018. Group I Paks are essential for epithelial-mesenchymal transition in an Apc-driven model of colorectal cancer. *Nat. Commun.* 9: 3473.
4. Xu, H., et al. 2019. Novel replisome-associated proteins at cellular replication forks in EBV-transformed B lymphocytes. *PLoS Pathog.* 15: e1008228.

STORAGE

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