

# hnRNP E2 (23-G): sc-101136

## 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 proteins 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., et al. 1995. A nuclear localization domain in the hnRNP A1 protein. *J. Cell Biol.* 129: 551-560.

## CHROMOSOMAL LOCATION

Genetic locus: PCBP2 (human) mapping to 12q13.13; Pcbp2 (mouse) mapping to 15 F3.

## SOURCE

hnRNP E2 (23-G) is a mouse monoclonal antibody raised against recombinant hnRNP E2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

hnRNP E2 (23-G) is recommended for detection of hnRNP E2 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), 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 E2 siRNA (h): sc-38270, hnRNP E2 siRNA (m): sc-38271, hnRNP E2 shRNA Plasmid (h): sc-38270-SH, hnRNP E2 shRNA Plasmid (m): sc-38271-SH, hnRNP E2 shRNA (h) Lentiviral Particles: sc-38270-V and hnRNP E2 shRNA (m) Lentiviral Particles: sc-38271-V.

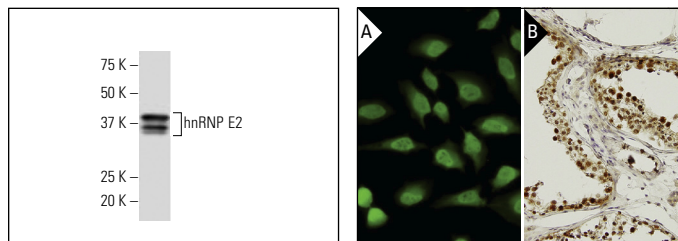
Molecular Weight of hnRNP E2: 40 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

## STORAGE

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

## DATA



hnRNP E2 (23-G): sc-101136. Western blot analysis of hnRNP E2 expression in K-562 whole cell lysate.

hnRNP E2 (23-G): sc-101136. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic localization (B).

## SELECT PRODUCT CITATIONS

1. Dinh, P.X., et al. 2013. Heterogeneous nuclear ribonucleoprotein K supports vesicular stomatitis virus replication by regulating cell survival and cellular gene expression. *J. Virol.* 87: 10059-10069.
2. Lee, Y.B., et al. 2013. Hexanucleotide repeats in ALS/FTD form length-dependent RNA foci, sequester RNA binding proteins, and are neurotoxic. *Cell Rep.* 5: 1178-1186.
3. Koganti, S., et al. 2015. Cellular STAT3 functions via PCBP2 to restrain Epstein-Barr virus lytic activation in B lymphocytes. *J. Virol.* 89: 5002-5011.
4. Ren, C., et al. 2016. RNA-binding protein PCBP2 regulates p73 expression and p73-dependent antioxidant defense. *J. Biol. Chem.* 291: 9629-9637.
5. Davidson, Y.S., et al. 2017. Heterogeneous ribonuclear protein E2 (hnRNP E2) is associated with TDP-43-immunoreactive neurites in semantic dementia but not with other TDP-43 pathological subtypes of frontotemporal lobar degeneration. *Acta Neuropathol. Commun.* 5: 54.
6. Martínez-Pizarro, A., et al. 2018. Intronic PAH gene mutations cause a splicing defect by a novel mechanism involving U1snRNP binding downstream of the 5' splice site. *PLoS Genet.* 14: e1007360.
7. Ustyantsev, I.G., et al. 2020. Identification of nucleotide sequences and some proteins involved in polyadenylation of RNA transcribed by Pol III from SINEs. *RNA Biol.* E-published.
8. Georgiadou, D., et al. 2021. Knockdown of splicing complex protein PCBP2 reduces extravillous trophoblast differentiation through transcript switching. *Front. Cell Dev. Biol.* 9: 671806.

## RESEARCH USE

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