SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP E1 (Z-21): sc-133666

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.
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.
5. Kim, J.H., et al. 2000. Protein-protein interaction among hnRNPs shuttling between nucleus and cytoplasm. J. Mol. Biol. 298: 395-405.
6. Melcak, I., et al. 2000. Nuclear pre-mRNA compartmentalization: trafficking of released transcripts to splicing factor reservoirs. Mol. Biol. Cell 11: 497-510.
7. Mahe, D., et al. 2000. Spatiotemporal regulation of hnRNP M and 2H9 gene expression during mouse embryonic development. Biochim. Biophys. Acta. 1492: 414-424.

CHROMOSOMAL LOCATION

Genetic locus: PCBP1 (human) mapping to 2p14.

SOURCE

hnRNP E1 (Z-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic hnRNP E1 peptide of human origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

hnRNP E1 (Z-21) is recommended for detection of hnRNP E1 of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

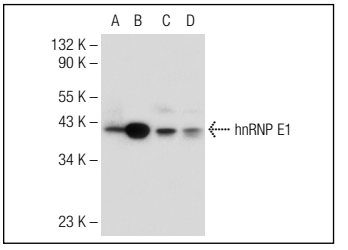
Molecular Weight of hnRNP E1: 43 kDa.

Positive Controls: hnRNP E1 (m2): 293T Lysate: sc-120857, Hep G2 cell lysate: sc-2227 or human PBL.

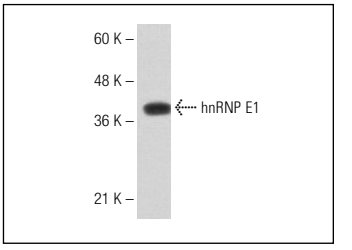
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



hnRNP E1 (Z-21): sc-133666. Western blot analysis of hnRNP E1 expression in non-transfected 293T: sc-117752 (**A**), mouse hnRNP E1 transfected 293T: sc-120857 (**B**), CCRF-CEM (**C**) and K-562 (**D**) whole cell lysates.



hnRNP E1 (Z-21): sc-133666. Western blot analysis of hnRNP E1 expression in Hep G2 whole cell lysate.

RESEARCH USE

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