SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP E1 (E-2): sc-137249

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

hnRNP E1 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 227-261 within an internal region of hnRNP E1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

hnRNP E1 (E-2) is available conjugated to HRP (sc-137249 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

Blocking peptide available for competition studies, sc-137249 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

hnRNP E1 (E-2) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

hnRNP E1 (E-2) 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.

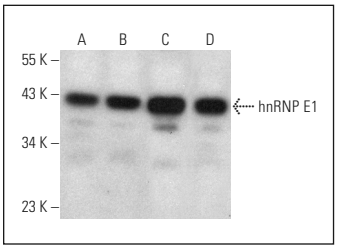
Molecular Weight of hnRNP E1: 43 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

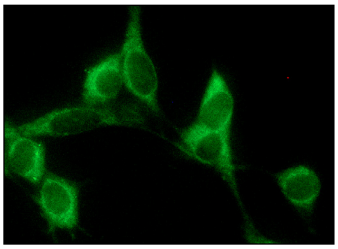
STORAGE

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

DATA



hnRNP E1 (E-2): sc-137249. Western blot analysis of hnRNP E1 expression in HeLa (**A**), NIH/3T3 (**B**) and K-562 (**C**) whole cell lysates and Sol8 nuclear extract (**D**).



hnRNP E1 (E-2): sc-137249. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Cho, S.J., et al. 2013. Poly C-binding protein 1 regulates p63 expression through mRNA stability. PLoS ONE 8: e71724.
2. Ren, C., et al. 2014. DNA polymerase η is regulated by poly(rC)-binding protein 1 via mRNA stability. Biochem. J. 464: 377-386.
3. Zhang, W., et al. 2016. Poly C-binding protein 1 represses autophagy through downregulation of LC3B to promote tumor cell apoptosis in starvation. Int. J. Biochem. Cell Biol. 73: 127-136.
4. Ji, F.J., et al. 2017. Expression of both poly r(C) binding protein 1 (PCBP1) and miRNA-3978 is suppressed in peritoneal gastric cancer metastasis. Sci. Rep. 7: 15488.
5. Zhao, X., et al. 2018. Poly r(C) binding protein 1-mediated regulation of microRNA expression underlies post-sevoflurane amelioration of acute lung injury in rats. J. Cell. Physiol. 233: 3048-3054.
6. Yoshida, A., et al. 2018. Phosphatase of regenerating liver maintains cellular magnesium homeostasis. Biochem. J. 475: 1129-1139.
7. Luo, T., et al. 2020. lncRNA PCBP1-AS1 aggravates the progression of hepatocellular carcinoma via regulating PCBP1/PRL-3/Akt pathway. Cancer Manag. Res. 12: 5395-5408.
8. Gong, X., et al. 2021. Circular RNA circEsyt2 regulates vascular smooth muscle cell remodeling via splicing regulation. J. Clin. Invest. 131: e147031.
9. Choi, S.Y., et al. 2022. Differential expression and sorting of exosomal microRNAs upon activation of the human monocyte-like cell line U937. Biochem. Biophys. Res. Commun. 610: 147-153.
10. Krapacher, F.A., et al. 2022. Convergent dopamine and ALK4 signaling to PCBP1 controls FosB alternative splicing and cocaine behavioral sensitization. EMBO J. 41: e110721.

RESEARCH USE

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