SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP D0 (T-10): sc-22368

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The Power to Question

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription, pre-mRNA processing, 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 be-tween the nucleus and the cytoplasm. Two abundant and ubiquitously expressed members of the hnRNP family are hnRNP D0 and hnRNP R. Specifically, the hnRNP D0 protein contains two RNA-binding domains (RBDs), which bind to both RNA and DNA sequences. hnRNP D0 also posesses a transactivator domain and is involved in transcriptional regulation.

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.

CHROMOSOMAL LOCATION

Genetic locus: HNRNPD (human) mapping to 4q21.22; Hnrnpd (mouse) mapping to 5 E4.

SOURCE

hnRNP D0 (T-10) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of hnRNP D0 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-22368 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

hnRNP D0 (T-10) is recommended for detection of hnRNP D0 isoforms 1-4 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

hnRNP D0 (T-10) is also recommended for detection of hnRNP D0 isoforms 1-4 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for hnRNP D0 siRNA (h): sc-37028, hnRNP D0 siRNA (m): sc-37029, hnRNP D0 shRNA Plasmid (h): sc-37028-SH, hnRNP D0 shRNA Plasmid (m): sc-37029-SH, hnRNP D0 shRNA (h) Lentiviral Particles: sc-37028-V and hnRNP D0 shRNA (m) Lentiviral Particles: sc-37029-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Pan, Y., et al. 2005. Interaction of RNA-binding proteins HuR and AUF1 with the human ATF3 mRNA 3'-untranslated region regulates its amino acid limitation-induced stabilization. J. Biol. Chem. 280: 34609-34619.
2. Jeyaraj, S., et al. 2005. HuR stabilizes vacuolar H^+-translocating ATPase mRNA during cellular energy depletion. J. Biol. Chem. 280: 37957-37964.
3. Tien, C.L., et al. 2008. The polyglutamine-expanded protein Ataxin-3 decreases Bcl-2 mRNA stability. Biochem. Biophys. Res. Commun. 365: 232-238.
4. Li, H., et al. 2009. Identification of mRNA binding proteins that regulate the stability of LDL receptor mRNA through AU-rich elements. J. Lipid Res. 50: 820-831.
5. Al-Khalaf, H.H., et al. 2011. $p16^{INK4a}$ positively regulates cyclin D1 and E2F1 through negative control of AUF1. PLoS ONE 6: e21111.
6. Lane, K.R., et al. 2013. Cell cycle-regulated protein abundance changes in synchronously proliferating HeLa cells include regulation of pre-mRNA splicing proteins. PLoS ONE 8: e58456.
7. Roff, A.N., et al. 2013. Post-transcriptional regulation of meprin α by the RNA-binding proteins Hu antigen R (HuR) and tristetraprolin (TTP). J. Biol. Chem. 288: 4733-4743.

STORAGE

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

RESEARCH USE

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