SANTA CRUZ BIOTECHNOLOGY, INC.

HuD (N-15): sc-5977

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Elav-like genes encode for a family of RNA-binding proteins. Elav, a *Drosophila* protein and the first described member, is expressed immediately after neuroblastic differentiation into neurons and is necessary for neuronal differentiation and maintenance. Several mammalian Elav-like proteins, designated HuC, HuD and Hel-N1, are also expressed in postmitotic neurons. An additional mammalian homolog, HuR, which is also designated HuA, is ubiquitously expressed and is also overexpressed in a wide variety of tumors. Characteristically, these homologs all contain three RNA recognition motifs (RRM), and they specifically bind to AU-rich elements (ARE) in the 3'-untranslated region of mRNAs transcripts. ARE sites target mRNA for rapid degradation and thereby regulate the expression levels of genes involved in cell growth and differentiation. When Elav-like proteins associate with these ARE sites this degradation is inhibited, leading to an increased stability of the corresponding transcript. Elav proteins function within the nucleus, and they are shuttled between the nucleus and cytoplasm by a nuclear export signal, which is a regulatory feature of the Elav-like proteins as it limits their accessibility to ARE sites.

REFERENCES

1. Chagnovich, D., et al. 1996. Differential activity of ELAV-like RNA-binding proteins in human neuroblastoma. J. Biol. Chem. 271: 33587-33591.
2. Wakamatsu, Y., et al. 1997 Sequential expression and role of Hu RNA-binding proteins during neurogenesis. Development 124: 3449-3460.
3. King, P. 1997. Differential expression of the neuroendocrine genes Hel-N1 and HuD in small-cell lung carcinoma: evidence for down-regulation of HuD in the variant phenotype. Int. J. Cancer 74: 378-382.

CHROMOSOMAL LOCATION

Genetic locus: ELAVL4 (human) mapping to 1p33; Elavl4 (mouse) mapping to 4 C7.

SOURCE

HuD (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of HuD of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5977 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

HuD (N-15) is recommended for detection of HuD of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for HuD siRNA (h): sc-37835, HuD siRNA (m): sc-37836, HuD shRNA Plasmid (h): sc-37835-SH, HuD shRNA Plasmid (m): sc-37836-SH, HuD shRNA (h) Lentiviral Particles: sc-37835-V and HuD shRNA (m) Lentiviral Particles: sc-37836-V.

Molecular Weight of HuD: 40 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, SH-SY5Y cell lysate: sc-3812 or mouse brain extract: sc-2253.

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) 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. Akool, el-S., et al. 2003. Nitric oxide increases the decay of matrix metalloproteinase 9 mRNA by inhibiting the expression of mRNA-stabilizing factor HuR. Mol. Cell. Biol. 23: 4901-4916.
2. Serrano-Pozo, A., et al. 2005. Neurological picture. Spinal anterior artery territory infarction simulating an acute myocardial infarction. J. Neurol. Neurosurg. Psychiatr. 76: 1584.
3. Maeda, K., et al. 2006. Paraneoplastic cerebellar degeneration in olfactory neuroepithelioma. J. Neurol. Neurosurg. Psychiatr. 77: 123-124.
4. Kuhlenbäumer, G., et al. 2006. The collagen 1A2 polymorphism rs42524, which is associated with intracranial aneurysms, shows no association with spontaneous cervical artery dissection (sCAD). J. Neurol. Neurosurg. Psychiatr. 77: 124-125.
5. Lakhan, S.E. and Kirchgessner, A. 2011. Gut microbiota and sirtuins in obesity-related inflammation and bowel dysfunction. J. Transl. Med. 9: 202.