SANTA CRUZ BIOTECHNOLOGY, INC.

HuR (G-5): sc-374285



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 HuB (also designated Hel-N1 in human, or Mel-N1 in mouse), HuC and HuD 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

- Chagnovich, D., et al. 1996. Differential activity of Elav-like RNA-binding proteins in human neuroblastoma. J. Biol. Chem. 271: 33587-33591.
- Wakamatsu, Y., et al. 1997. Sequential expression and role of Hu RNAbinding proteins during neurogenesis. Development 124: 3449-3460.
- 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.
- Ball, N.S., et al. 1997. Neuron-specific hel-N1 and HuD as novel molecular markers of neuroblastoma: a correlation of HuD messenger RNA levels with favorable prognostic features. Clin. Cancer Res. 3: 1859-1865.

SOURCE

HuR (G-5) is a mouse monoclonal antibody raised against amino acids 1-280 of HuR of human origin.

PRODUCT

Each vial contains 200 μg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HuR (G-5) is recommended for detection of HuR, HuB, HuC and HuD of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffinembedded 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).

Molecular Weight of HuR: 36 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



HuR (G-5): sc-374285. Western blot analysis of HuR expression in IMR-32 (**A**), Jurkat (**B**), HL-60 (**C**), ALL-SIL (**D**), NIH/3T3 (**E**) and RAW 309 Cr.1 (**F**) whole cell lysates.



HuR (G-5): sc-374285. Western blot analysis of HuR expression in HL-60 (A), HEL 92.1.7 (B), MOLT-4 (C), Ramos (D) and C6 (E) whole cell lysates.



HuR (6-5): sc-374285. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear and cytoplasmic staining of glandular cells (B).



HuR (G-5): sc-374285. Immunoperoxidase staining of formalin fixed, parafin-embedded human parathyroid gland tissue showing nuclear staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear staining of exocrine glandular cells and Islets of Langerhans (B).

SELECT PRODUCT CITATIONS

 Latorre, E., et al. 2016. Human antigen R binding and regulation of Sox2 mRNA in human mesenchymal stem cells. Mol. Pharmacol. 89: 243-252.

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.