SANTA CRUZ BIOTECHNOLOGY, INC.

HuR (3A2): sc-5261

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 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. Character-istically, 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.

SOURCE

HuR (3A2) is a mouse monoclonal antibody raised against full length HuR of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HuR (3A2) is available conjugated to agarose (sc-5261 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-5261 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-5261 PE), fluorescein (sc-5261 FITC), Alexa Fluor® 488 (sc-5261 AF488), Alexa Fluor® 546 (sc-5261 AF546), Alexa Fluor® 594 (sc-5261 AF594) or Alexa Fluor® 647 (sc-5261 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-5261 AF680) or Alexa Fluor® 790 (sc-5261 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HuR (3A2) is recommended for detection of HuR, HuB, HuC and HuD of mouse, rat, human and *Xenopus laevis* 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), immunohistochemistry (including paraffin-embedded 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: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

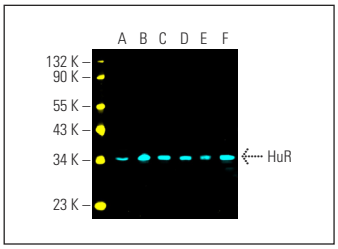
RESEARCH USE

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

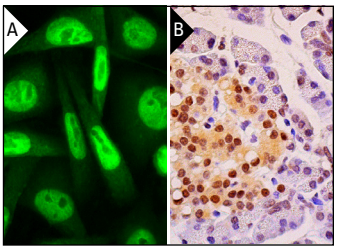
STORAGE

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

DATA



HuR (3A2) Alexa Fluor® 647: sc-5261 AF647. Direct fluorescent western blot analysis of HuR expression in HeLa (**A**), Jurkat (**B**), MOLT-4 (**C**), Hep G2 (**D**), Ramos (**E**) and K-562 (**F**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 488: sc-516790.



HuR (3A2) Alexa Fluor® 488: sc-5261 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). HuR (3A2) HRP: sc-5261 HRP. Direct 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

1. Park, J.S., et al. 2000. A role for both Ets and C/EBP transcription factors and mRNA stabilization in the MAPK-dependent increase in p21 (Cip-1/WAF1/mda6) protein levels in primary hepatocytes. Mol. Biol. Cell 11: 2915-2932.
2. Yanagawa-Matsuda, A., et al. 2019. Oncolytic potential of an E4-deficient adenovirus that can recognize the stabilization of AU-rich element containing mRNA in cancer cells. Oncol. Rep. 41: 954-960.
3. Franchini, D.M., et al. 2019. Microtubule-driven stress granule dynamics regulate inhibitory immune checkpoint expression in T cells. Cell Rep. 26: 94-107.
4. Kumarasinghe, N. and Moss, W.N. 2019. Analysis of a structured intronic region of the LMP2 pre-mRNA from EBV reveals associations with human regulatory proteins and nuclear Actin. BMC Res. Notes 12: 33.
5. Noh, J.H., et al. 2019. Loss of RNA-binding protein GRSF1 activates mTOR to elicit a proinflammatory transcriptional program. Nucleic Acids Res. 47: 2472-2486.
6. Green, L.C., et al. 2019. Human antigen R as a therapeutic target in pathological cardiac hypertrophy. JCI Insight 4 pii: 121541.
7. Ji, E., et al. 2019. RNA binding protein HuR promotes autophagosome formation by regulating expressions of autophagy-related protein 5, 12, and 16 in human hepatocellular carcinoma cells. Mol. Cell. Biol. E-published.

PROTOCOLS

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