

# HuD (E-1): sc-28299

## 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 RNA-binding proteins during neurogenesis. *Development* 124: 3449-3460.

## CHROMOSOMAL LOCATION

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

## SOURCE

HuD (E-1) is a mouse monoclonal antibody raised against amino acids 1-300 of HuD of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HuD (E-1) is available conjugated to agarose (sc-28299 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28299 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28299 PE), fluorescein (sc-28299 FITC), Alexa Fluor® 488 (sc-28299 AF488), Alexa Fluor® 546 (sc-28299 AF546), Alexa Fluor® 594 (sc-28299 AF594) or Alexa Fluor® 647 (sc-28299 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28299 AF680) or Alexa Fluor® 790 (sc-28299 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

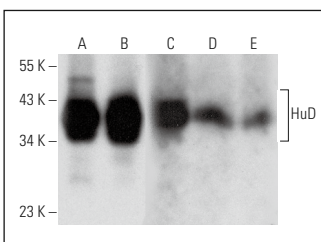
HuD (E-1) is recommended for detection of HuD of mouse, rat and human origin by Western Blotting (starting dilution 1:1,000, dilution range 1:1,000-1:10,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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).

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.

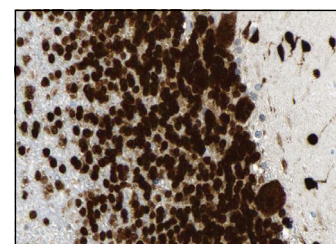
Molecular Weight of HuD: 40 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, Neuro-2A whole cell lysate: sc-364185 or EOC 20 whole cell lysate: sc-364187.

## DATA



HuD (E-1): sc-28299. Western blot analysis of HuD expression in SH-SY5Y (A), Neuro-2A (B), EOC 20 (C), C6 (D) and NRK (E) whole cell lysates.



HuD (E-1): sc-28299. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing nuclear staining of the granular layer, molecular layer and Purkinje cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

- Elamin, M.H., et al. 2010. Curcumin inhibits the Sonic Hedgehog signaling pathway and triggers apoptosis in medulloblastoma cells. *Mol. Carcinog.* 49: 302-314.
- Kim, H., et al. 2018. Ablation of Ezh2 in neural crest cells leads to aberrant enteric nervous system development in mice. *PLoS ONE* 13: e0203391.
- Zheng, Z., et al. 2019. Downregulation of P2Y2 and HuD during the development of the enteric nervous system in fetal rats with anorectal malformations. *Mol. Med. Rep.* 20: 1297-1305.
- Nolan, M., et al. 2020. Quantitative patterns of motor cortex proteinopathy across ALS genotypes. *Acta Neuropathol. Commun.* 8: 98.
- Andreassi, C., et al. 2021. Cytoplasmic cleavage of IMPA1 3' UTR is necessary for maintaining axon integrity. *Cell Rep.* 34: 108778.

## RESEARCH USE

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