SANTA CRUZ BIOTECHNOLOGY, INC.

UCH-L1 (10A1): sc-58593

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

UCH-L1 (ubiquitin C-terminal hydrolase) is a member of a gene family whose products hydrolyze small C-terminal adducts of ubiquitin to generate the ubiquitin monomer. Expression of UCH-L1 is highly specific to neurons and to cells of the diffuse neuroendocrine system and their tumors. UCH-L1 is expressed in brain neurons. Examination of specific brain regions reveals expression in all areas tested, particularly in the substantia nigra. UCH-L1 represents 1-2% of total soluble brain protein. Its occurrence in Lewy bodies and its function in the proteasome pathway make it a compelling candidate gene in Parkinson disease. The gene which encodes UCH-L1 maps to human chromosome 4p13. The 230 amino acid human UCH-L3 protein is 54% identical to that of UCH-L1. UCH-L3 is the predominant thiol protease and has high-affinity binding sites for ubiquitin.

REFERENCES

1. Doran, J.F., et al. 1983. Isolation of PGP 9.5, a new human neurone-specific protein detected by high resolution two-dimensional electrophoresis. J. Neurochem. 40: 1542-1547.
2. Wilkinson, K.D., et al. 1989. The neuron-specific protein PGP 9.5 is a ubiquitin carboxyl-terminal hydrolase. Science 246: 670-672.
3. Mayer, A.N. and Wilkinson, K.D. 1989. Detection, resolution and nomenclature of multiple ubiquitin carboxyl-terminal esterases from bovine calf thymus. Biochemistry 28: 166-172.
4. Edwards, Y.H., et al. 1991. The gene for human neuron specific ubiquitin C-terminal hydrolase maps to chromosome 4p14. Cytogenet. Cell Genet. 58: 1886-1887.
5. Leroy, E., et al. 1998. Intron-exon structure of ubiquitin C-terminal hydrolase-L1. DNA Res. 5: 397-400.

CHROMOSOMAL LOCATION

Genetic locus: UCHL1 (human) mapping to 4p13.

SOURCE

UCH-L1 (10A1) is a mouse monoclonal antibody raised against full length UCH-L1 of human origin.

PRODUCT

Each vial contains 250 µl culture supernatant containing IgG_{2b} with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

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

APPLICATIONS

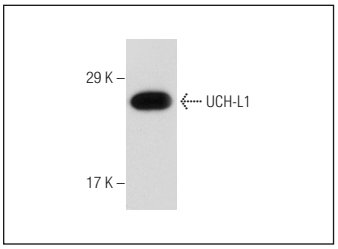
UCH-L1 (10A1) is recommended for detection of UCH-L1 of rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:3000).

Suitable for use as control antibody for UCH-L1 siRNA (h): sc-42304, UCH-L1 shRNA Plasmid (h): sc-42304-SH and UCH-L1 shRNA (h) Lentiviral Particles: sc-42304-V.

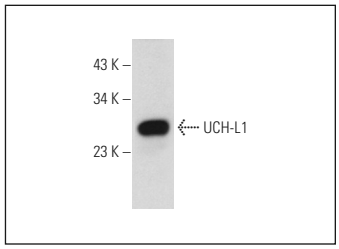
Molecular Weight of UCH-L1: 25 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or rat brain extract: sc-2392.

DATA



UCH-L1 (10A1): sc-58593. Western blot analysis of UCH-L1 expression in IMR-32 whole cell lysates.



UCH-L1 (10A1): sc-58593. Western blot analysis of UCH-L1 expression in rat brain tissue extract.

SELECT PRODUCT CITATIONS

1. Jang, M.J., et al. 2011. UCH-L1 promotes cancer metastasis in prostate cancer cells through EMT induction. Cancer Lett. 302: 128-135.
2. García, A., et al. 2011. High-resolution two-dimensional gel electrophoresis analysis of atrial tissue proteome reveals down-regulation of fibulin-1 in atrial fibrillation. Int. J. Cardiol. 150: 283-290.

RESEARCH USE

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