SANTA CRUZ BIOTECHNOLOGY, INC.

UCH-L1 (C-4): sc-271639

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.

CHROMOSOMAL LOCATION

Genetic locus: UCHL1 (human) mapping to 4p13; Uchl1 (mouse) mapping to 5 C3.1.

SOURCE

UCH-L1 (C-4) is a mouse monoclonal antibody raised against amino acids 184-223 mapping at the C-terminus of UCH-L1 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.

UCH-L1 (C-4) is available conjugated to agarose (sc-271639 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271639 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271639 PE), fluorescein (sc-271639 FITC), Alexa Fluor® 488 (sc-271639 AF488), Alexa Fluor® 546 (sc-271639 AF546), Alexa Fluor® 594 (sc-271639 AF594) or Alexa Fluor® 647 (sc-271639 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271639 AF680) or Alexa Fluor® 790 (sc-271639 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

UCH-L1 (C-4) is recommended for detection of UCH-L1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for UCH-L1 siRNA (h): sc-42304, UCH-L1 siRNA (m): sc-42305, UCH-L1 shRNA Plasmid (h): sc-42304-SH, UCH-L1 shRNA Plasmid (m): sc-42305-SH, UCH-L1 shRNA (h) Lentiviral Particles: sc-42304-V and UCH-L1 shRNA (m) Lentiviral Particles: sc-42305-V.

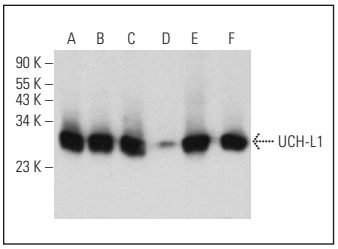
Molecular Weight of UCH-L1: 25 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, Neuro-2A whole cell lysate: sc-364185 or IMR-32 cell lysate: sc-2409.

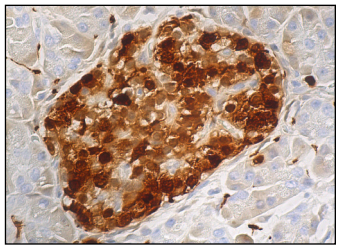
STORAGE

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

DATA



UCH-L1 (C-4): sc-271639. Western blot analysis of UCH-L1 expression in IMR-32 (**A**), SK-N-SH (**B**), Neuro-2A (**C**), BC_3H1 (**D**), PC-12 (**E**) and RIN-m5F (**F**) whole cell lysates.



UCH-L1 (C-4): sc-271639. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and nuclear staining of Islets of Langerhans.

SELECT PRODUCT CITATIONS

1. Altun, M., et al. 2011. Activity-based chemical proteomics accelerates inhibitor development for deubiquitylating enzymes. Chem. Biol. 18: 1401-1412.
2. Corsetti, V., et al. 2015. NH_2-truncated human Tau induces deregulated mitophagy in neurons by aberrant recruitment of Parkin and UCHL-1: implications in Alzheimer's disease. Hum. Mol. Genet. 24: 3058-3081.
3. Latina, V., et al. 2018. NGF-dependent changes in ubiquitin homeostasis trigger early cholinergic degeneration in cellular and animal AD-model. Front. Cell. Neurosci. 12: 487.
4. Liu, C., et al. 2019. Pparg promotes differentiation and regulates mitochondrial gene expression in bladder epithelial cells. Nat. Commun. 10: 4589.
5. Cucci, M.A., et al. 2020. Ailanthone increases oxidative stress in CDDP-resistant ovarian and bladder cancer cells by inhibiting of Nrf2 and YAP expression through a post-translational mechanism. Free Radic. Biol. Med. 150: 125-135.
6. Hor, P., et al. 2020. Efficient generation and transcriptomic profiling of human iPSC-derived pulmonary neuroendocrine cells. iScience 23: 101083.
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8. Chen, L.Y., et al. 2020. Effects of rutin on wound healing in hyperglycemic rats. Antioxidants 9: 1122.
9. Chen, L.Y., et al. 2021. Therapeutic potential of luteolin on impaired wound healing in streptozotocin-induced rats. Biomedicines 9: 761.
10. Ciregia, F., et al. 2021. Parathyroid carcinoma and adenoma co-existing in one patient: case report and comparative proteomic analysis. Cancer Genomics Proteomics 18: 781-796.

RESEARCH USE

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