SANTA CRUZ BIOTECHNOLOGY, INC.

UCH-L1 (h): 293T Lysate: sc-176636

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., Jackson, P., Kynoch, P. and Thompson, R.J. 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., Lee, K.M., Deshpande, S., Duerksen-Hughes, P., Boss, J.M. and Pohl, J. 1989. The neuron-specific protein PGP 9.5 is a ubiquitin carboxyl-terminal hydrolase. Science 246: 670-673.
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., Fox, M.F., Povey, S., Hinks, L.J., Day, I.N.M. and Thompson, R.J. 1991. The gene for human neuron specific ubiquitin C-terminal hydrolase maps to chromosome 4p14. Cytogenet. Cell Genet. 58: 1886-1887.
5. Leroy, E., Boyer, R. and Polymeropoulos, M.H. 1998. Intron-exon structure of ubiquitin C-terminal hydrolase-L1. DNA Res. 5: 397-400.

CHROMOSOMAL LOCATION

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

PRODUCT

UCH-L1 (h): 293T Lysate represents a lysate of human UCH-L1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

UCH-L1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive UCH-L1 antibodies.

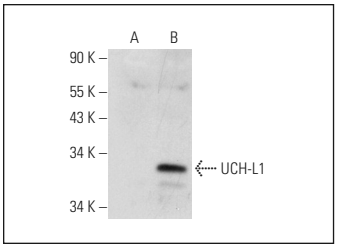
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

UCH-L1 (13C4): sc-58594 is recommended as a positive control antibody for Western Blot analysis of enhanced human UCH-L1 expression in UCH-L1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



UCH-L1 (13C4): sc-58594. Western blot analysis of UCH-L1 expression in non-transfected: sc-117752 (**A**) and human UCH-L1 transfected: sc-176636 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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