SANTA CRUZ BIOTECHNOLOGY, INC.

Ubr1 (24-Z): sc-100626

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The N-end rule relates the *in vivo* half-life of a protein to the composition of its N-terminal residues. The N-end rule pathway is part of the ubiquitin system, which involves a three-step mechanism. Proteins targeted for degradation are bound on their N-terminal residue by Ubr1 (also designated E3 α and N-recognin), which catalyzes the covalent attachment of ubiquitin to the protein substrate. Two zinc finger domains and the RING-H2 finger domain of Ubr1 are essential for substrate recognition. Ubr1 is located on mouse chromosome 2 and on human chromosome 15 in the syntenic region. Ubr1 is ubiquitously expressed in adult mouse, with the highest expression detected in skeletal muscle and heart. In mouse embryo, Ubr1 is primarily expressed in the branchial arches and in the tail and limb buds.

REFERENCES

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2. Varshavsky, A. 1997. The N-end rule pathway of protein degradation. Genes Cells 2: 13-28.
3. Kwon, Y.T., Reiss, Y., Fried, V.A., Hershko, A., Yoon, J.K., Gonda, D.K., Sangan, P., Copeland, N.G., Jenkins, N.A. and Varshavsky, A. 1998. The mouse and human genes encoding the recognition component of the N-end rule pathway. Proc. Natl. Acad. Sci. USA 95: 7898-7903.
4. Kwon, Y.T., Levy, F. and Varshavsky, A. 1999. Bivalent inhibitor of the N-end rule pathway. J. Biol. Chem. 274: 18135-18139.
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CHROMOSOMAL LOCATION

Genetic locus: UBR1 (human) mapping to 15q15.2.

SOURCE

Ubr1 (24-Z) is a mouse monoclonal antibody raised against recombinant Ubr1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Ubr1 (24-Z) is recommended for detection of Ubr1 of human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ubr1 siRNA (h): sc-106918, Ubr1 shRNA Plasmid (h): sc-106918-SH and Ubr1 shRNA (h) Lentiviral Particles: sc-106918-V.

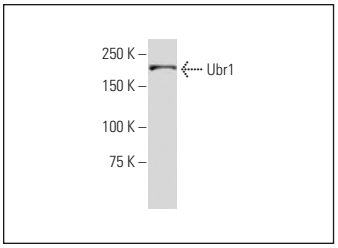
Molecular Weight of Ubr1: 230 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Ubr1 (24-Z): sc-100626. Western blot analysis of Ubr1 expression in HeLa nuclear extract.

SELECT PRODUCT CITATIONS

1. Kume, K., Iizumi, Y., Shimada, M., Ito, Y., Kishi, T., Yamaguchi, Y. and Handa, H. 2010. Role of N-end rule ubiquitin ligases Ubr1 and Ubr2 in regulating the leucine-mTOR signaling pathway. Genes Cells 15: 339-349.
2. Eldeeb, M.A. and Fahlman, R.P. 2014. The anti-apoptotic form of tyrosine kinase Lyn that is generated by proteolysis is degraded by the N-end rule pathway. Oncotarget 5: 2714-2722.
3. Eldeeb, M.A. and Fahlman, R.P. 2016. Phosphorylation impacts N-end rule degradation of the proteolytically activated form of BMX kinase. J. Biol. Chem. 291: 22757-22768.

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.