SANTA CRUZ BIOTECHNOLOGY, INC.

Ubr1 (yC-16): sc-26146

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ubiquitin, an abundant, highly conserved protein found in all eukaryotic cells, exists as either a free form or covalently attached to cellular proteins. Ubiquitin functions to clear abnormal, foreign and improperly folded proteins from eukaryotic cells by targeting them to the 26S proteasome for degradation. In *Saccharomyces cerevisiae*, Ubr1, an E3 component of the E3-E2 ubiquitin ligases, participates in the N-end rule pathway, which relates the *in vivo* half-life of a protein to the identity of its N-terminal residue. It delivers ubiquitinated proteins to the 26S proteasome by directly interacting with the 19S particle, which mediates the entry of substrates into the 20S core protease. Ubr1 (225 kDa) physically associates with Ubc2 (20 kDa), an essential protein for multiubiquitination and degradation of N-end rule substrates, to participate in DNA repair, induced mutagenesis, sporulation and regulation of retrotransposition.

REFERENCES

1. Dohmen, R.J., Madura, K., Bartel, B., and Varshavsky, A. 1991. The N-end rule is mediated by the Ubc2(Rad6) ubiquitin-conjugating enzyme. Proc. Natl. Acad. Sci. USA 88: 7351-7355.
2. Madura, K., Dohmen, R.J., and Varshavsky, A. 1993. N-recognin/Ubc2 interactions in the N-end rule pathway. J. Biol. Chem. 268: 12046-12054.
3. Ciechanover, A. 1994. The ubiquitin-proteasome proteolytic pathway. Cell 79: 13-21.
4. Ciechanover, A. and Schwartz, A.L. 1994. The ubiquitin-mediated proteolytic pathway: mechanisms of recognition of the proteolytic substrate and involvement in the degradation of native cellular proteins. FASEB J. 8: 182-191.
5. Hochstrasser, M. 1995. Ubiquitin, proteasomes and the regulation of intracellular protein degradation. Curr. Opin. Cell Biol. 7: 215-223.
6. Kwon, Y.T., Levy, F., and Varshavsky, A. 1999. Bivalent inhibitor of the N-end rule pathway. J. Biol. Chem. 274: 18135-18139.
7. Xie, Y. and Varshavsky, A. 2000. Physical association of ubiquitin ligases and the 26S proteasome. Proc. Natl. Acad. Sci. USA 97: 2497-2502.

SOURCE

Ubr1 (yC-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ubr1 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26146 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Ubr1 (yC-16) is recommended for detection of Ubr1 of yeast origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Ubr1: 230 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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

PROTOCOLS

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