SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2D3 (m): 293T Lysate: sc-124412

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

UBE2D1 (ubiquitin-conjugating enzyme E2D1 or UBC5A), UBE2D2 (ubiquitin-conjugating enzyme E2D2 or UBC5B), and UBE2D3 (ubiquitin-conjugating enzyme E2D3 or UBC5C) are E2 ubiquitin-conjugating enzymes, components of the protein ubiquitination pathway. Protein ubiquitination covalent modification targets proteins for 26 S proteasome-dependent degradation. Three classes of enzymes influence the conjugation mechanism of ubiquitin to protein. E1 ubiquitin-activating enzymes mediate ATP-dependent charging of ubiquitin via formation of a high energy thiol ester bond between the C-terminus of ubiquitin and a cysteine within itself. Thiol ester-linked ubiquitin is then transferred from E1 to a cysteine residue in an E2 ubiquitin-conjugating enzyme. E2 enzymes in conjunction with E3 ubiquitin-protein ligases transfer ubiquitin monomers and polyubiquitin chains to the substrate target protein, where stable isopeptide linkages are formed.

REFERENCES

1. Schwarz, S.E., et al. 1998. Characterization of human hect domain family members and their interaction with UbcH5 and UbcH7. J. Biol. Chem. 273: 12148-12154.
2. Gehrke, S.G., et al. 2003. UbcH5A, a member of human E2 ubiquitin-conjugating enzymes, is closely related to SFT, a stimulator of iron transport, and is up-regulated in hereditary hemochromatosis. Blood 101: 3288-3293.
3. Gu, H., et al. 2003. The degradation of promyelocytic leukemia and Sp100 proteins by herpes simplex virus 1 is mediated by the ubiquitin-conjugating enzyme UbcH5a. Proc. Natl. Acad. Sci. USA 100: 8963-8968.
4. Dominguez, C., et al. 2004. Structural model of the UbcH5B/CNOT4 complex revealed by combining NMR, mutagenesis, and docking approaches. Structure 12: 633-644.
5. Knutson, M., et al. 2004. Developmental, regional, and cellular expression of SFT/UbcH5A and DMT1 mRNA in brain. J. Neurosci. Res. 76: 633-641.
6. Saville, M.K., et al. 2004. Regulation of p53 by the ubiquitin-conjugating enzymes UbcH5B/C *in vivo*. J. Biol. Chem. 279: 42169-42181.
7. Houben, K., et al. 2004. Solution structure of the ubiquitin-conjugating enzyme UbcH5B. J. Mol. Biol. 344: 513-526.
8. Saxena, K., et al. 2005. Backbone NMR assignment of the human E2 ubiquitin conjugating enzyme UbcH5α (F72K,F82S) double mutant. J. Biomol. NMR 32: 338.
9. Brzovic, P.S., et al. 2006. A UbcH5/ubiquitin noncovalent complex is required for processive BRCA1-directed ubiquitination. Mol. Cell 21: 873-880.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Ube2d3 (mouse) mapping to 3 G3.

PRODUCT

UBE2D3 (m): 293T Lysate represents a lysate of mouse UBE2D3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

UBE2D3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive UBE2D3 antibodies. Recommended use: 10-20 µl per lane.

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

RESEARCH USE

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