SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2J1 (18-Y): sc-100624

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ubiquitination is an important molecular mechanism by which abnormal or short-lived proteins are targeted for degradation by the concerted efforts of at least three classes of enzymes: ubiquitin-activating enzymes (E1s), ubiquitin-conjugating enzymes (E2s) and ubiquitin-protein ligases (E3s). UBE2J1 (ubiquitin-conjugating enzyme E2 J1), also known as Ubc6p, CGI-76, NCUBE1, HSPC153 or HSPC205, is a 318 amino acid single-pass type IV membrane protein that belongs to the E2 ubiquitin-conjugating enzyme family and is involved in protein degradation. Localized to the membrane of the endoplasmic reticulum (ER), UBE2J1 catalyzes the attachment of ubiquitin to misfolded membrane proteins, thereby targeting them for proteasomal destruction. This ATP-dependent reaction yields AMP, a diphosphate and a ubiquitin-tagged protein and may be a method of quality control within the ER.

REFERENCES

1. Gilon, T., et al. 2000. Degradation signals recognized by the Ubc6p-Ubc7p ubiquitin-conjugating enzyme pair. Mol. Cell. Biol. 20: 7214-7219.
2. Lester, D., et al. 2000. Identification of a family of noncanonical ubiquitin-conjugating enzymes structurally related to yeast UBC6. Biochem. Biophys. Res. Commun. 269: 474-480.
3. Walter, J., et al. 2001. Sec61p-independent degradation of the tail-anchored ER membrane protein Ubc6p. EMBO J. 20: 3124-3131.
4. Tiwari, S. and Weissman, A.M. 2001. Endoplasmic reticulum (ER)-associated degradation of T cell receptor subunits. Involvement of ER-associated ubiquitin-conjugating enzymes (E2s). J. Biol. Chem. 276: 16193-16200.
5. Botero, D., et al. 2002. Ubc6p and ubc7p are required for normal and substrate-induced endoplasmic reticulum-associated degradation of the human selenoprotein type 2 iodothyronine monodeiodinase. Mol. Endocrinol. 16: 1999-2007.
6. Lenk, U., et al. 2002. A role for mammalian Ubc6 homologues in ER-associated protein degradation. J. Cell Sci. 115: 3007-3014.

CHROMOSOMAL LOCATION

Genetic locus: UBE2J1 (human) mapping to 6q15; Ube2j1 (mouse) mapping to 4 A5.

SOURCE

UBE2J1 (18-Y) is a mouse monoclonal antibody raised against recombinant UBE2J1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} 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

UBE2J1 (18-Y) is recommended for detection of UBE2J1 of mouse, rat and 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 UBE2J1 siRNA (h): sc-95256, UBE2J1 siRNA (m): sc-154853, UBE2J1 shRNA Plasmid (h): sc-95256-SH, UBE2J1 shRNA Plasmid (m): sc-154853-SH, UBE2J1 shRNA (h) Lentiviral Particles: sc-95256-V and UBE2J1 shRNA (m) Lentiviral Particles: sc-154853-V.

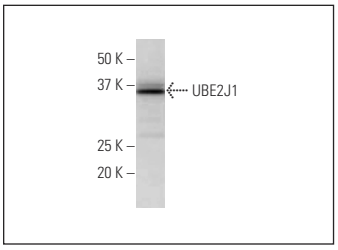
Molecular Weight of UBE2J1: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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



UBE2J1 (18-Y): sc-100624. Western blot analysis of UBE2J1 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Menon, M.B., et al. 2013. Endoplasmic reticulum-associated ubiquitin-conjugating enzyme Ube2j1 is a novel substrate of MK2 (MAPKAP kinase-2) involved in MK2-mediated TNFα production. Biochem. J. 456: 163-172.
2. Sun, T., et al. 2014. MiR-221 promotes the development of androgen independence in prostate cancer cells via downregulation of HECTD2 and RAB1A. Oncogene 33: 2790-2800.
3. Menon, M.B., et al. 2017. p38MAPK/MK2-dependent phosphorylation controls cytotoxic RIPK1 signalling in inflammation and infection. Nat. Cell Biol. 19: 1248-1259.
4. Trulley, P., et al. 2019. Alternative translation initiation generates a functionally distinct isoform of the stress-activated protein kinase MK2. Cell Rep. 27: 2859-2870.

RESEARCH USE

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