SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2E1 (42): sc-136113

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. The first step requires the ATP-dependent activation of the Ub C-terminus and the assembly of multi-Ub chains by the Ub-activating enzyme known as the E1 component. The Ub chain is then conjugated to the Ub-conjugating enzyme (E2) to generate an intermediate Ub-E2 complex. The Ub-ligase (E3) then catalyzes the transfer of Ub from E2 to the appropriate protein substrate. UBE2E1 and UBE2L3, also designated UBCH6 and UBCH7 respectively in human, are E2 conjugating enzymes that interact with various proteins. Specifically, UBE2E1 interacts with the tumor suppressor protein TSSC5. UBE2L3 has been shown to mediate c-Fos degradation, NFκB maturation, human papilloma virus-mediated p53 and Myc protein degradation.

REFERENCES

1. Nuber, U., et al. 1996. Cloning of human ubiquitin-conjugating enzymes UBCH6 and UBCH7 (E2-F1) and characterization of their interaction with E6-AP and RSP5. J. Biol. Chem. 271: 2795-2800.
2. Ardley, H.C., et al. 2000. Promoter analysis of the human ubiquitin-conjugating enzyme including UBE2L3, which encodes UBCH7. Biochim. Biophys. Acta 1491: 57-64.
3. Ardley, H.C., et al. 2001. Features of the parkin/ariadne-like ubiquitin ligase, its interaction with the ubiquitin-conjugating enzyme, UBCH7. J. Biol. Chem. 276: 19640-19647.
4. Passmore, L.A. and Barford, D. 2004. Getting into position: the catalytic mechanisms of protein ubiquitylation. Biochem. J. 379: 513-525.
5. Kuhlbrodt, K., et al. 2005. Orchestra for assembly and fate of polyubiquitin chains. Essays Biochem. 41: 1-14.
6. Takeuchi, T., et al. 2006. Link between the ubiquitin conjugation system and the ISG15 conjugation system: ISG15 conjugation to the UbcH6 ubiquitin E2 enzyme. J. Biochem. 138: 711-719.
7. Yamada, H.Y. and Gorbsky, G.J. 2006. Tumor suppressor candidate TSSC5 is regulated by UbcH6 and a novel ubiquitin ligase RING105. Oncogene 25: 1330-1339.

CHROMOSOMAL LOCATION

Genetic locus: UBE2E1 (human) mapping to 3p24.3; Ube2e1 (mouse) mapping to 14 A2.

SOURCE

UBE2E1 (42) is a mouse monoclonal antibody raised against amino acids 46-58 of UBE2E1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

UBE2E1 (42) is recommended for detection of UBE2E1 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

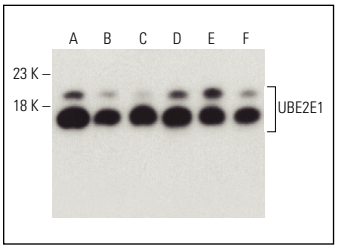
UBE2E1 (42) is also recommended for detection of UBE2E1 in additional species, including canine.

Suitable for use as control antibody for UBE2E1 siRNA (h): sc-61744, UBE2E1 siRNA (m): sc-61745, UBE2E1 shRNA Plasmid (h): sc-61744-SH, UBE2E1 shRNA Plasmid (m): sc-61745-SH, UBE2E1 shRNA (h) Lentiviral Particles: sc-61744-V and UBE2E1 shRNA (m) Lentiviral Particles: sc-61745-V.

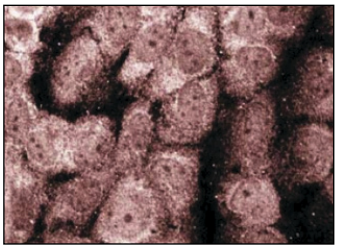
Molecular Weight of UBE2E1: 21-24 kDa.

Positive Controls: HEK293T whole cell lysate: sc-45137, ECV304 cell lysate: sc-2269 or U-698-M whole cell lysate: U-698-M.

DATA



UBE2E1 (42): sc-136113. Western blot analysis of UBE2E1 expression in HEK293T (**A**), ECV304 (**B**), RPMI-8226 (**C**), U-698-M (**D**), PC-3 (**E**) and THP-1 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



UBE2E1 (42): sc-136113. Immunofluorescence staining of human endothelial cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Shi, Y., et al. 2017. Ube2D3 and Ube2N are essential for RIG-I-mediated MAVS aggregation in antiviral innate immunity. Nat. Commun. 8: 15138.

STORAGE

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

PROTOCOLS

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