SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2E2 (S-20): sc-130052

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). The first step in the ubiquitination process requires the ATP-dependent activation of the ubiquitin C-terminus and the assembly of multi-ubiquitin chains by the E1 enzyme. The ubiquitin chain is then conjugated to the E2 enzyme to generate an intermediate ubiquitin-E2 complex. The E3 enzyme then catalyzes the transfer of ubiquitin from E2 to the appropriate protein substrate, thereby targeting that substrate for degradation. A wide range of enzymes facilitate this proteolytic ubiquitin pathway, one of which is UBE2E2 (also known as UBCH8 in human), which functions as an E2 enzyme and catalyzes the ATP-dependent covalent attachment of ubiquitin to target proteins, thereby playing an important role in protein degradation.

REFERENCES

1. Kimura, M., Hattori, T., Matsuda, Y., Yoshioka, T., Sumi, N., Umeda, Y., Nakashima, S. and Okano, Y. 1997. cDNA cloning, characterization, and chromosome mapping of UBE2E2 encoding a human ubiquitin-conjugating E2 enzyme. Cytogenet. Cell Genet. 78: 107-111.
2. Moynihan, T.P., Ardley, H.C., Nuber, U., Rose, S.A., Jones, P.F., Markham, A.F., Scheffner, M. and Robinson, P.A. 1999. The ubiquitin-conjugating enzymes UBCH7 and UBCH8 interact with RING finger/IBR motif-containing domains of HHARI and H7-AP1. J. Biol. Chem. 274: 30963-30968.
3. Ito, K., Adachi, S., Iwakami, R., Yasuda, H., Muto, Y., Seki, N. and Okano, Y. 2001. N-Terminally extended human ubiquitin-conjugating enzymes (E2s) mediate the ubiquitination of RING-finger proteins, ARA54 and RNF8. Eur. J. Biochem. 268: 2725-2732.
4. Pringa, E., Martinez-Noel, G., Muller, U. and Harbers, K. 2001. Interaction of the ring finger-related U-box motif of a nuclear dot protein with ubiquitin-conjugating enzymes. J. Biol. Chem. 276: 19617-19623.

CHROMOSOMAL LOCATION

Genetic locus: UBE2E2 (human) mapping to 3p24.3; Ube2e2 (mouse) mapping to 14 A2.

SOURCE

UBE2E2 (S-20) is a purified rabbit polyclonal antibody raised against UBE2E2 of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

UBE2E2 (S-20) is recommended for detection of UBE2E2 of mouse, rat, human and dog 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UBE2E2 siRNA (h): sc-106656, UBE2E2 siRNA (m): sc-154846, UBE2E2 shRNA Plasmid (h): sc-106656-SH, UBE2E2 shRNA Plasmid (m): sc-154846-SH, UBE2E2 shRNA (h) Lentiviral Particles: sc-106656-V and UBE2E2 shRNA (m) Lentiviral Particles: sc-154846-V.

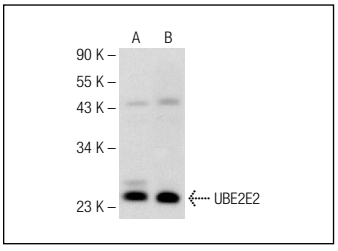
Molecular Weight of UBE2E2: 22 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, PC-3 cell lysate: sc-2220 or LNCaP cell lysate: sc-2231.

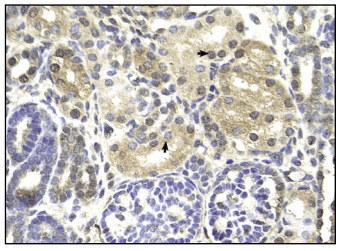
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



UBE2E2 (S-20): sc-130052. Western blot analysis of UBE2E2 expression in PC-3 (**A**) and LNCaP (**B**) whole cell lysates.



UBCH8 (S-20): sc-130052. Immuno-peroxidase staining of formalin fixed, paraffin-embedded human kidney showing cytoplasmic staining.

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.