SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2J2 (G-12): sc-104723



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). UBE2J2 (ubiquitin-conjugating enzyme E2 J2), also known as NCUBE2 (non-canonical ubiquitin-conjugating enzyme 2), is a 259 amino acid single pass type IV membrane protein that that belongs to the E2 ubiquitin-conjugating enzyme family and is involved in protein degradation. Localized to the membrane of the endoplasmic reticulum (ER), UBE2J2 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. Two isoforms of UBE2J2 exist due to alternative splicing events.

REFERENCES

- 1. Gilon, T., et al. 2000. Degradation signals recognized by the UBC6P-UBC7P ubiquitin-conjugating enzyme pair. Mol. Cell. Biol. 20: 7214-7219.
- Lester, D., et al. 2000. Identification of a family of noncanonical ubiquitinconjugating enzymes structurally related to yeast UBC6. Biochem. Biophys. Res. Commun. 269: 474-480.
- 3. Walter, J., et al. 2001. Sec61p-independent degradation of the tailanchored ER membrane protein UBC6P. EMBO J. 20: 3124-3131.
- Tiwari, S., et al. 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.
- 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.
- 7. Wu, C.J., et al. 2005. TNF α induced c-IAP1/TRAF2 complex translocation to a UBC6-containing compartment and TRAF2 ubiquitination. EMBO J. 24: 1886-1898.

CHROMOSOMAL LOCATION

Genetic locus: UBE2J2 (human) mapping to 1p36.33; Ube2j2 (mouse) mapping to 4 E2.

SOURCE

UBE2J2 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UBE2J2 of human 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-104723 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UBE2J2 (G-12) is recommended for detection of UBE2J2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family member UBE2J1.

UBE2J2 (G-12) is also recommended for detection of UBE2J2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for UBE2J2 siRNA (h): sc-88839, UBE2J2 siRNA (m): sc-154854, UBE2J2 siRNA (r): sc-156131, UBE2J2 shRNA Plasmid (h): sc-88839-SH, UBE2J2 shRNA Plasmid (m): sc-154854-SH, UBE2J2 shRNA Plasmid (r): sc-156131-SH, UBE2J2 shRNA (h) Lentiviral Particles: sc-88839-V, UBE2J2 shRNA (m) Lentiviral Particles: sc-154854-V and UBE2J2 shRNA (r) Lentiviral Particles: sc-156131-V.

Molecular Weight of UBE2J2: 29 kDa.

Positive Controls: UBE2J2 (h): 293T Lysate: sc-372745.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



UBE2J2 (b-12): Sc-104723. Western biot analysis of UBE2J2 expression in non-transfected: sc-117752 (A) and human UBE2J2 transfected: sc-372745 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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