

# UBE2N (4E11): sc-58452

## BACKGROUND

UBE2N, a member of the E2 Ubiquitin-conjugating enzyme family, completes the second step of ubiquitination reactions, essentially targeting proteins for proteasomic degradation. When proteins are modified with ubiquitin in an important cellular mechanism targeting abnormal or short lived proteins, ubiquitin, a short protein of 76 amino acids, attaches to a lysine residue resting on the target protein. Multiple cycles of ubiquitination create a polyubiquitin chain that the proteasome recognizes and subsequently triggers the ATP-dependent unfolding of the target protein. This allows proteolytic degradation of the target protein. These degradation products are highly expressed in heart and skeletal muscles. Ube2N moderates the transcriptional activation of target genes, affects the progress of cell differentiation and aging, and also influences the DNA repair pathway, further adding to the survival of cells after DNA damage.

## REFERENCES

- Sancho, E., et al. 1998. Role of UEV-1, an inactive variant of the E2 ubiquitin-conjugating enzymes, in *in vitro* differentiation and cell cycle behavior of HT-29-M6 intestinal mucosecretory cells. *Mol. Cell. Biol.* 18: 576-589.
- VerPlank, L., et al. 2001. Tsg101, a homologue of ubiquitin-conjugating (E2) enzymes, binds the L domain in HIV type 1 Pr55<sup>Gag</sup>. *Proc. Natl. Acad. Sci. USA* 98: 7724-7729.
- Risseeuw, E.P., et al. 2003. Protein interaction analysis of SCF ubiquitin E3 ligase subunits from *Arabidopsis*. *Plant J.* 34: 753-767.
- Okamoto, Y., et al. 2003. UbcH10 is the cancer-related E2 ubiquitin-conjugating enzyme. *Cancer Res.* 63: 4167-4173.
- Zhou, H., et al. 2004. Bcl10 activates the NFκB pathway through ubiquitination of NEMO. *Nature* 427: 167-171.
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- Tokunaga, F. 2006. E2 ubiquitin-conjugating enzymes: structures and functions. *Tanpakushitsu Kakusan Koso* 51: 1150-1156.
- Nandi, D., et al. 2006. The ubiquitin-proteasome system. *J. Biosci.* 31: 137-155.

## CHROMOSOMAL LOCATION

Genetic locus: UBE2N (human) mapping to 12q22; Ube2n (mouse) mapping to 10 C2.

## SOURCE

UBE2N (4E11) is a mouse monoclonal antibody raised against full length UBE2N of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

UBE2N (4E11) is available conjugated to agarose (sc-58452 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58452 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58452 PE), fluorescein (sc-58452 FITC), Alexa Fluor® 488 (sc-58452 AF488), Alexa Fluor® 546 (sc-58452 AF546), Alexa Fluor® 594 (sc-58452 AF594) or Alexa Fluor® 647 (sc-58452 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-58452 AF680) or Alexa Fluor® 790 (sc-58452 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

UBE2N (4E11) is recommended for detection of UBE2N of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Molecular Weight of UBE2N: 17 kDa.

## 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) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## SELECT PRODUCT CITATIONS

- Mulas, F., et al. 2021. The deubiquitinase OTUB1 augments NFκB-dependent immune responses in dendritic cells in infection and inflammation by stabilizing UBC13. *Cell. Mol. Immunol.* 18: 1512-1527.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.