

UBC13/UBE2NL (N-20): sc-19542

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). UBC13, also known as UBE2N or BLU, is a 152 amino acid member of the E2 ubiquitin-conjugating enzyme family. Existing as a heterodimer with Mms2 (also known as UBE2V2), UBC13 catalyzes the ATP-dependent synthesis of non-canonical polyubiquitin chains, a process that does not lead to proteasomal degradation. UBC13 mediates the transcription of several target genes and is thought to play a role in cell cycle progression, cellular differentiation and DNA repair mechanisms that ensure cell survival after DNA damage. UBE2NL (ubiquitin-conjugating enzyme E2N-like) is a 153 amino acid protein that belongs to the ubiquitin-conjugating enzyme family and is encoded by a gene located on human chromosome 12.

REFERENCES

1. Yamaguchi, T., et al. 1996. Cloning and expression of cDNA encoding a human ubiquitin-conjugating enzyme similar to the *Drosophila* bendless gene product. *J. Biochem.* 120: 494-497.
2. Hoege, C., et al. 2002. RAD6-dependent DNA repair is linked to modification of PCNA by ubiquitin and SUMO. *Nature* 419: 135-141.
3. Andersen, P.L., et al. 2005. Distinct regulation of Ubc13 functions by the two ubiquitin-conjugating enzyme variants Mms2 and Uev1A. *J. Cell Biol.* 170: 745-755.

CHROMOSOMAL LOCATION

Genetic locus: UBE2N (human) mapping to 12q21.33, UBE2NL (human) mapping to Xq27.3; Ube2n (mouse) mapping to 10 C2, Ube2nl (mouse) mapping to 7 C.

SOURCE

UBC13/UBE2NL (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of UBC13 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-19542 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

UBC13/UBE2NL (N-20) is recommended for detection of UBC13 and UBE2NL 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)], 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).

UBC13/UBE2NL (N-20) is also recommended for detection of UBC13 and UBE2NL in additional species, including equine, canine, bovine, porcine and avian.

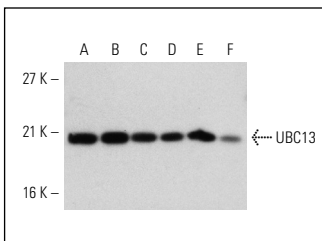
Molecular Weight of UBC13/UBE2NL: 17 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, CTLL-2 cell lysate: sc-2242 or HeLa whole cell lysate: sc-2200.

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



UBC13 (N-20): sc-19542. Western blot analysis of UBC13 expression in BJAB (A), MCP-5 (B), CCRF-CEM (C), Jurkat (D), CTLL-2 (E) and HeLa (F) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tseng, P.H., et al. 2010. Different modes of ubiquitination of the adaptor TRAF3 selectively activate the expression of type I interferons and proinflammatory cytokines. *Nat. Immunol.* 11: 70-75.


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