

# UBC13 (L-22): sc-134137

## 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. Additionally, 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.

## 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. Hoegge, 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.
4. Plans, V., et al. 2006. The RING finger protein RNF8 recruits UBC13 for Lysine 63-based self polyubiquitylation. *J. Cell. Biochem.* 97: 572-582.
5. Yamamoto, M., et al. 2006. Key function for the UBC13 E2 ubiquitin-conjugating enzyme in immune receptor signaling. *Nat. Immunol.* 7: 962-970.
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## CHROMOSOMAL LOCATION

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

## SOURCE

UBC13 (L-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic UBC13 peptide of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml 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.

## RESEARCH USE

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

## APPLICATIONS

UBC13 (L-22) is recommended for detection of UBC13 of mouse, rat, human, *Drosophila melanogaster* and zebrafish 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UBC13 siRNA (h): sc-43551, UBC13 siRNA (m): sc-43553, UBC13 shRNA Plasmid (h): sc-43551-SH, UBC13 shRNA Plasmid (m): sc-43553-SH, UBC13 shRNA (h) Lentiviral Particles: sc-43551-V and UBC13 shRNA (m) Lentiviral Particles: sc-43553-V.

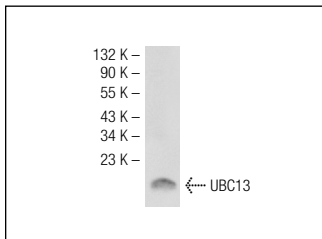
Molecular Weight of UBC13: 17 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

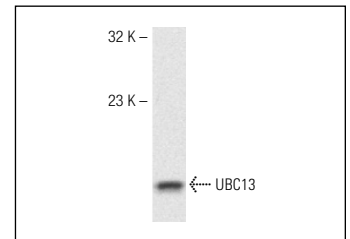
## RECOMMENDED SECONDARY REAGENTS

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).

## DATA



UBC13 (L-22): sc-134137. Western blot analysis of UBC13 expression in BJAB whole cell lysate.



UBC13 (L-22): sc-134137. Western blot analysis of UBC13 expression in Hep G2 whole cell lysate.

## PROTOCOLS

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