

UBE2D (C-15): sc-15000

BACKGROUND

Ubiquitin is an abundant, highly conserved protein found in all eukaryotic cells either free or covalently attached to cellular proteins. The primary function of ubiquitin in mammalian systems is to clear abnormal, foreign, and improperly folded proteins by targeting them for proteasome degradation. UBE2D proteins, including UBE2D1 (ubiquitin-conjugating enzyme E2D1 or UBC5A), UBE2D2 (ubiquitin-conjugating enzyme E2D2 or UBC5B) and UBE2D3 (ubiquitin-conjugating enzyme E2D3 or UBC5C), are E2 ubiquitin-conjugating enzymes that catalyze the ubiquitination of I κ B α in a phosphorylation and SCFB-TRCP-dependent manner. Specifically, E1 first transfers a ubiquitin residue to the E2 component (a UBE2D protein), and the UBE2D protein then associates with an E3 ubiquitin-protein ligase, which immediately transfers that residue to a protein that is targeted for degradation. In this fashion, the ubiquitin targets the I κ B α for degradation by a proteasome thus lifting the inhibitory effect of I κ B α on NF κ B and allowing NF κ B to enter the nucleus.

REFERENCES

1. Ciechanover, A. 1994. The ubiquitin-proteasome proteolytic pathway. *Cell* 79: 13-21.
2. Ciechanover, A., et al. 1994. The ubiquitin-mediated proteolytic pathway: mechanisms of recognition of the proteolytic substrate and involvement in the degradation of native cellular proteins. *FASEB J.* 8: 182-191.
3. Hochstrasser, M. 1995. Ubiquitin, proteasomes and the regulation of intracellular protein degradation. *Curr. Opin. Cell Biol.* 7: 215-223.

SOURCE

UBE2D (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of UBE2D of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15000 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UBE2D (C-15) is recommended for detection of reactive with all isoforms of UBE2D 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).

UBE2D (C-15) is also recommended for detection of reactive with all isoforms of UBE2D in additional species, including canine, bovine, porcine and avian.

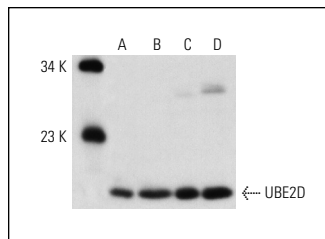
Molecular Weight of UBE2D: 17 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, F9 cell lysate: sc-2245 or mouse testis extract: sc-2405.

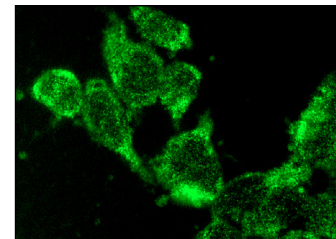
STORAGE

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

DATA



UBE2D (C-15): sc-15000. Western blot analysis of UBE2D expression in heat shocked NIH/3T3 (A), F9 whole cell lysates (B), mouse testis extract (C) and rat testis tissue extract (D).



UBE2D (C-15): sc-15000. Immunofluorescence staining of methanol-fixed F9 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Saville, M.K., et al. 2004. Regulation of p53 by the ubiquitin-conjugating enzymes UBCH5B/C *in vivo*. *J. Biol. Chem.* 279: 42169-42181.
2. Luo, M., et al. 2005. Cross talk in hormonally regulated gene transcription through induction of estrogen receptor ubiquitylation. *Mol. Cell. Biol.* 25: 7386-7398.
3. Howard, R.A., et al. 2007. Ubiquitin conjugating enzymes participate in polyglutamine protein aggregation. *BMC Cell Biol.* 8: 32.
4. Fernandez-Sanchez, M.E., et al. 2010. The human COP9 signalosome protects ubiquitin-conjugating enzyme 3 (UBC3/Cdc34) from β -transducin repeat-containing protein (β TrCP)-mediated degradation. *J. Biol. Chem.* 285: 17390-17397.

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.



Try **UBE2D (C-6): sc-166278** or **UBE2D (F-6): sc-166277**, our highly recommended monoclonal alternatives to UBE2D (C-15).