

# UBE2U (D-14): sc-104725

## BACKGROUND

The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. The first step requires ATP-dependent activation of the Ub C-terminus and assembly of multi-Ub chains by a Ub-activating enzyme known as the E1 component. The Ub chain is then conjugated to the Ub-conjugating enzyme (E2) to generate an intermediate Ub-E2 complex. The Ub-ligase (E3) then catalyzes the transfer of Ub from E2 to the appropriate protein substrate. UBE2U (ubiquitin-conjugating enzyme E2U) is a 321 amino acid E2 ubiquitin conjugating enzyme that catalyzes the covalent attachment of ubiquitin to other proteins. Existing as two alternatively spliced isoforms, UBE2U is encoded by a gene located on human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

## REFERENCES

1. Nuber, U., Schwarz, S., Kaiser, P., Schneider, R. and Scheffner, M. 1996. Cloning of human ubiquitin-conjugating enzymes UbcH6 and UbcH7 (E2-F1) and characterization of their interaction with E6-AP and RSP5. *J. Biol. Chem.* 271: 2795-800.
2. Ardley, H.C., Moynihan, T.P., Markham, A.F. and Robinson, P.A. 2000. Promoter analysis of the human ubiquitin-conjugating enzyme including UBE2L3 which encodes UbcH7. *Biochim. Biophys. Acta* 1491: 57-64.
3. Ardley, H.C., Tan, N.G., Rose, S.A., Markham, A.F. and Robinson, P.A. 2001. Features of the parkin/ariadne-like ubiquitin ligase, its interaction with the ubiquitin-conjugating enzyme, UbcH7. *J. Biol. Chem.* 276: 19640-19647.
4. Passmore, L.A. and Barford, D. 2004. Getting into position: the catalytic mechanisms of protein ubiquitylation. *Biochem. J.* 379: 513-525.
5. Kuhlbrodt, K., Mouysset, J. and Hoppe, T. 2005. Orchestra for assembly and fate of polyubiquitin chains. *Essays Biochem.* 41: 1-14.
6. Takeuchi, T., Iwahara, S., Saeki, Y., Sasajima, H. and Yokosawa, H. 2006. Link between the ubiquitin conjugation system and t ISG15 conjugation to the UbcH6 ubiquitin E2 enzyme. *J. Biochem.* 138: 711-719.
7. Yamada, H.Y. and Gorbsky, G.J. 2006. Tumor suppressor candidate TSSC5 is regulated by UbcH6 and a novel ubiquitin ligase RING105. *Oncogene* 25: 1330-1339.

## CHROMOSOMAL LOCATION

Genetic locus: UBE2U (human) mapping to 1p31.3.

## SOURCE

UBE2U (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UBE2U 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-104725 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

UBE2U (D-14) is recommended for detection of UBE2U of 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).

UBE2U (D-14) is also recommended for detection of UBE2U in additional species, including porcine.

Suitable for use as control antibody for UBE2U siRNA (h): sc-88077, UBE2U shRNA Plasmid (h): sc-88077-SH and UBE2U shRNA (h) Lentiviral Particles: sc-88077-V.

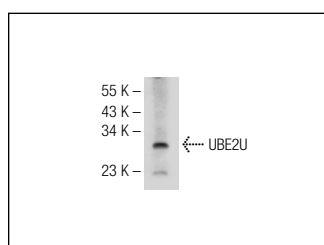
Molecular Weight of UBE2U: 38 kDa.

Positive Controls: mouse placenta tissue extract.

## 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 Blotting 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



UBE2U (D-14): sc-104725. Western blot analysis of UBE2U expression in mouse placenta tissue extract.

## 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.

## PROTOCOLS

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