

# UBE2G2 (N-14): sc-79191

## BACKGROUND

UBE2G2 (ubiquitin-conjugating enzyme E2 G2), also known as UBC7, is a 165 amino acid protein involved in ubiquitin-mediated protein degradation. 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). UBE2G2 is an E2 ubiquitin-conjugating enzyme that acts to catalyze the covalent attachment of ubiquitins to various proteins. Expressed throughout the body, UBE2G2 shares 100% sequence identity with its mouse counterpart and is thought to be involved in endoplasmic reticulum-associated degradation (ERAD). Two isoforms of UBE2G2 exist due to alternative splicing events.

## REFERENCES

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2. Webster, J.M., Tiwari, S., Weissman, A.M. and Wojcikiewicz, R.J. 2003. Inositol 1, 4, 5-trisphosphate receptor ubiquitination is mediated by mammalian Ubc7, a component of the endoplasmic reticulum-associated degradation pathway, and is inhibited by chelation of intracellular Zn<sup>2+</sup>. *J. Biol. Chem.* 278: 38238-38246.
3. Kim, B.W., Zavacki, A.M., Curcio-Morelli, C., Dentice, M., Harney, J.W., Larsen, P.R. and Bianco, A.C. 2003. Endoplasmic reticulum-associated degradation of the human type 2 iodothyronine deiodinase (D2) is mediated via an association between mammalian UBC7 and the carboxyl region of D2. *Mol. Endocrinol.* 17: 2603-2612.
4. Reyes, L.F., Sommer, C.A., Beltramini, L.M. and Henrique-Silva, F. 2006. Expression, purification and structural analysis of (HIS) UBE2G2 (human ubiquitin-conjugating enzyme). *Protein Expr. Purif.* 45: 324-328.
5. Chen, B., Mariano, J., Tsai, Y.C., Chan, A.H., Cohen, M. and Weissman, A.M. 2006. The activity of a human endoplasmic reticulum-associated degradation E3, GP78, requires its Cue domain, RING finger, and an E2-binding site. *Proc. Natl. Acad. Sci. USA* 103: 341-346.

## CHROMOSOMAL LOCATION

Genetic locus: UBE2G2 (human) mapping to 21q22.3; Ube2g2 (mouse) mapping to 10 C1.

## SOURCE

UBE2G2 (N-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of UBE2G2 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-79191 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

UBE2G2 (N-14) is recommended for detection of UBE2G2 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).

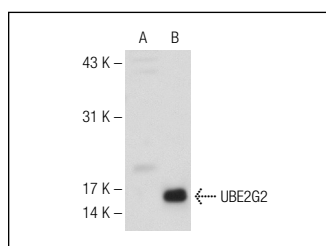
UBE2G2 (N-14) is also recommended for detection of UBE2G2 in additional species, including bovine, porcine and avian.

Suitable for use as control antibody for UBE2G2 siRNA (h): sc-76788, UBE2G2 siRNA (m): sc-76789, UBE2G2 shRNA Plasmid (h): sc-76788-SH, UBE2G2 shRNA Plasmid (m): sc-76789-SH, UBE2G2 shRNA (h) Lentiviral Particles: sc-76788-V and UBE2G2 shRNA (m) Lentiviral Particles: sc-76789-V.

Molecular Weight of UBE2G2: 18 kDa.

Positive Controls: UBE2G2 (m): 293 Lysate: sc-110723 or HeLa whole cell lysate: sc-2200.

## DATA



UBE2G2 (N-14): sc-79191. Western blot analysis of UBE2G2 expression in non-transfected: sc-110760 (A) and mouse UBE2G2 transfected: sc-110723 (B) 293 whole cell lysates.

## 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.

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Try **UBE2G2 (D-4): sc-393780** or **UBE2G2 (2E6): sc-100613**, our highly recommended monoclonal alternatives to UBE2G2 (N-14).