

UBE2C (N-13): sc-47545

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 the ATP-dependent activation of the Ub C-terminus and the assembly of multi-Ub chains by the 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. UBE2C, also designated UBCH10 in human, is an E2 ubiquitin conjugating enzyme for the anaphase promoting complex (APC), which coordinates mitosis and G₁ by sequentially promoting the degradation of key cell-cycle regulators. UBE2C is overexpressed in many different types of cancers and may be a potential therapeutic target.

REFERENCES

- Lin, Y., et al. 2002. Structural and functional analysis of the human mitotic-specific ubiquitin-conjugating enzyme, UBCH10. *J. Biol. Chem.* 277: 21913-21921.
- Okamoto, Y., et al. 2003. UBCH10 is the cancer-related E2 ubiquitin-conjugating enzyme. *Cancer Res.* 63: 4167-4173.
- Rape, M. and Kirschner, M.W. 2004. Autonomous regulation of the anaphase-promoting complex couples mitosis to S-phase entry. *Nature* 432: 588-595.
- Passmore, L.A. and Barford, D. 2004. Getting into position: the catalytic mechanisms of protein ubiquitylation. *Biochem. J.* 379: 513-525.
- Wagner, K.W., et al. 2004. Overexpression, genomic amplification and therapeutic potential of inhibiting the UBCH10 ubiquitin conjugase in human carcinomas of diverse anatomic origin. *Oncogene* 23: 6621-6629.
- Kobirumaki, F., et al. 2005. A novel UBCH10-binding protein facilitates the ubiquitylation of cyclin B *in vitro*. *J. Biochem.* 137: 133-139.

CHROMOSOMAL LOCATION

Genetic locus: UBE2C (human) mapping to 20q13.12; Ube2c (mouse) mapping to 2 H3.

SOURCE

UBE2C (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of UBE2C 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-47545 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.

APPLICATIONS

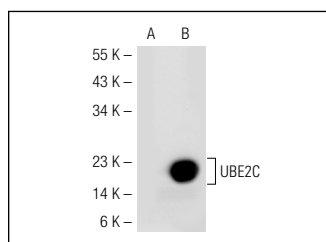
UBE2C (N-13) is recommended for detection of UBE2C isoforms 1, 2, 3 and 5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UBE2C siRNA (h): sc-61742, UBE2C siRNA (m): sc-61743, UBE2C shRNA Plasmid (h): sc-61742-SH, UBE2C shRNA Plasmid (m): sc-61743-SH, UBE2C shRNA (h) Lentiviral Particles: sc-61742-V and UBE2C shRNA (m) Lentiviral Particles: sc-61743-V.

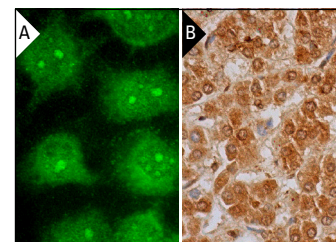
Molecular Weight of UBE2C: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, UBE2C (h): 293T Lysate: sc-116349 or SW480 cell lysate: sc-2219.

DATA



UBE2C (N-13): sc-47545. Western blot analysis of UBE2C expression in non-transfected: sc-117752 (A) and human UBE2C transfected: sc-116349 (B) 293T whole cell lysates.



UBE2C (N-13): sc-47545. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Lee, W.L., et al. 2010. Differential proteomic profiling identifies novel molecular targets of paclitaxel and phytoagent deoxyelephantopin against mammary adenocarcinoma cells. *J. Proteome Res.* 9: 237-253.

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.

MONOS
Satisfaction
Guaranteed

Try **UBE2C (B-12): sc-166339** or **UBE2C (B-4): sc-166499**, our highly recommended monoclonal alternatives to UBE2C (N-13).