SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2Q2 (N-12): sc-79196

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

UBE2Q2 (ubiquitin-conjugating enzyme E2 Q2) is a 375 amino acid cytoplasmic protein that is 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). One of several members of the ubiquitin-conjugating enzyme family, UBE2Q2 is an E2 ubiquitin-conjugating enzyme that acts to catalyze the covalent attachment of ubiquitin residues to various proteins. UBE2Q2 expression is detected in invasive epithelial tissue and tumor masses including head and neck squamous cell carcinomas, suggesting a role for UBE2Q2 in carcinogenesis. Two isoforms of UBE2Q2 exist due to alternative splicing events.

REFERENCES

1. Schulze, E., Altmann, M.E., Adham, I.M., Schulze, B., Fröde, S. and Engel, W. 2003. The maintenance of neuromuscular function requires UBC-25 in *Caenorhabditis elegans*. Biochem. Biophys. Res. Commun. 305: 691-699.
2. Melner, M.H., Ducharme, N.A., Brash, A.R., Winfrey, V.P. and Olson, G.E. 2004. Differential expression of genes in the endometrium at implantation: upregulation of a novel member of the E2 class of ubiquitin-conjugating enzymes. Biol. Reprod. 70: 406-414.
3. Zhang, Y.W., Otterness, D.M., Chiang, G.G., Xie, W., Liu, Y.C., Mercurio, F. and Abraham, R.T. 2005. Genotoxic stress targets human Chk1 for degradation by the ubiquitin-proteasome pathway. Mol. Cell 19: 607-618.
4. Melner, M.H., Haas, A.L., Klein, J.M., Brash, A.R., Boeglin, W.E., Nagdas, S.K., Winfrey, V.P. and Olson, G.E. 2006. Demonstration of ubiquitin thiolester formation of UBE2Q2 (UBCi), a novel ubiquitin-conjugating enzyme with implantation site-specific expression. Biol. Reprod. 75: 395-406.
5. Seghatoleslam, A., Zambrano, A., Millon, R., Ganguli, G., Argentini, M., Cromer, A., Abecassis, J. and Wasylyk, B. 2006. Analysis of a novel human gene, LOC92912, over-expressed in hypopharyngeal tumours. Biochem. Biophys. Res. Commun. 339: 422-429.
6. Banerjee, S., Brooks, W.S. and Crawford, D.F. 2007. Inactivation of the ubiquitin conjugating enzyme UBE2Q2 causes a prophase arrest and enhanced apoptosis in response to microtubule inhibiting agents. Oncogene 26: 6509-6517.

CHROMOSOMAL LOCATION

Genetic locus: UBE2Q2 (human) mapping to 15q24.2; Ube2q2 (mouse) mapping to 9 B.

SOURCE

UBE2Q2 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of UBE2Q2 of human origin.

STORAGE

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

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-79196 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UBE2Q2 (N-12) is recommended for detection of UBE2Q2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

UBE2Q2 (N-12) is also recommended for detection of UBE2Q2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for UBE2Q2 siRNA (h): sc-76792, UBE2Q2 siRNA (m): sc-76793, UBE2Q2 shRNA Plasmid (h): sc-76792-SH, UBE2Q2 shRNA Plasmid (m): sc-76793-SH, UBE2Q2 shRNA (h) Lentiviral Particles: sc-76792-V and UBE2Q2 shRNA (m) Lentiviral Particles: sc-76793-V.

Molecular Weight of UBE2Q2: 46 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

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 Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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.

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.