SANTA CRUZ BIOTECHNOLOGY, INC.

UBL4B (G-13): sc-137895

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ubiquitin is a 77 amino acid protein that targets proteins for degradation by the 26S proteasome. Ubiquitin-like proteins are not directly involved in protein degradation, but appear to have many mechanistic similarities with the ubiquitin pathway. UBL4B (ubiquitin-like protein 4B) is a 174 amino acid cytoplasmic protein that contains a ubiquitin-like domain. UBL4B likely arose by retroposition during mammalian evolution from UBL4A, an X-linked intron-bearing housekeeping gene. While UBL4A is highly conserved, UBL4B has undergone rapid evolution and may have evolved new functions. Expression of UBL4B is restricted to post-meiotic germ cells in testis and ovarian tissue, where it likely functions in post-translational protein modification.

REFERENCES

1. Yang, F., et al. 2007. Ubl4b, an X-derived retrogene, is specifically expressed in post-meiotic germ cells in mammals. Gene Expr. Patterns 7: 131-136.
2. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins, University Baltimore, MD. MIM Number: 611127. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Ha, B.H. and Kim, E.E. 2008. Structures of proteases for ubiqutin and ubiquitin-like modifiers. BMB Rep. 41: 435-443.
4. Edelmann, M.J., et al. B.M. 2008. Ubiquitin and ubiquitin-like specific proteases targeted by infectious pathogens: Emerging patterns and molecular principles. Biochim. Biophys. Acta 1782: 809-816.
5. Su, V. and Lau, A.F. 2009. Ubiquitin-like and ubiquitin-associated domain proteins: significance in proteasomal degradation. Cell. Mol. Life Sci. 66: 2819-2833.
6. Hochstrasser, M. 2009. Origin and function of ubiquitin-like proteins. Nature 458: 422-429.
7. Rohozinski, J., et al. 2009. Spermatogenesis associated retrogenes are expressed in the human ovary and ovarian cancers. PLoS ONE 4: e5064.

CHROMOSOMAL LOCATION

Genetic locus: UBL4B (human) mapping to 1p13.3; Ubl4b (mouse) mapping to 3 F2.3.

SOURCE

UBL4B (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UBL4B 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-137895 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

UBL4B (G-13) is recommended for detection of UBL4B of human and, to a lesser extent, mouse and rat 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); non cross-reactive with other UBL family members.

Suitable for use as control antibody for UBL4B siRNA (h): sc-78866, UBL4B siRNA (m): sc-154865, UBL4B shRNA Plasmid (h): sc-78866-SH, UBL4B shRNA Plasmid (m): sc-154865-SH, UBL4B shRNA (h) Lentiviral Particles: sc-78866-V and UBL4B shRNA (m) Lentiviral Particles: sc-154865-V.

Molecular Weight of UBL4B: 20 kDa.

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.