SANTA CRUZ BIOTECHNOLOGY, INC.

UBA52 (Y-13): sc-324974

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The Power to Question

BACKGROUND

Ubiquitin (Ub) is among the most phylogenetically conserved proteins known. The primary function of ubiquitin is to clear abnormal, foreign and improperly folded proteins by targeting them for degradation by the 26S proteosome. Encoded by four genes, ubiquitin is synthesized as precursor proteins that consist of either single ubiquitin moieties fused 5-prime to unrelated carboxyl extension proteins, known as UBA type, or polyubiquitin chains that are cleaved into moieties of the UBB or UBC types. As a UBA type ubiquitin, UBA52 (Ubiquitin-60S ribosomal protein L40), also known as CEP52 and Ubiquitin A-52 residue ribosomal protein fusion product 1, is a 128 amino acid protein that is cleaved into ubiquitin and 60S ribosomal protein L40. Normally expressed in lymphocytes and placenta, UBA52 is overexpressed in renal cancer cells and colorectal carcinoma, suggesting it may have a role to play in tumorigenesis.

REFERENCES

1. Salvesen, G., et al. 1987. cDNA encoding a human homolog of yeast ubiquitin 1. Nucleic Acids Res. 15: 5485.
2. Kanayama, H., et al. 1991. Changes in expressions of proteasome and ubiquitin genes in human renal cancer cells. Cancer Res. 51: 6677-6685.
3. Baker, R.T. and Board, P.G. 1991. The human ubiquitin-52 amino acid fusion protein gene shares several structural features with mammalian ribosomal protein genes. Nucleic Acids Res. 19: 1035-1040.
4. Barnard, G.F., et al. 1995. Ubiquitin fusion proteins are overexpressed in colon cancer but not in gastric cancer. Biochim. Biophys. Acta 1272: 147-153.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 191321. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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7. Cripps, D., et al. 2006. Alzheimer disease-specific conformation of hyperphosphorylated paired helical filament-Tau is polyubiquitinated through Lys-48, Lys-11, and Lys-6 ubiquitin conjugation. J. Biol. Chem. 281: 10825-10838.
8. Huang, F., et al. 2006. Differential regulation of EGF receptor internalization and degradation by multiubiquitination within the kinase domain. Mol. Cell 21: 737-748.

CHROMOSOMAL LOCATION

Genetic locus: UBA52 (human) mapping to 19p13.11; Uba52 (mouse) mapping to 8 B3.3.

SOURCE

UBA52 (Y-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UBA52 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-324974 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UBA52 (Y-13) is recommended for detection of UBA52 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).

UBA52 (Y-13) is also recommended for detection of UBA52 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for UBA52 siRNA (h): sc-106653, UBA52 siRNA (m): sc-154840, UBA52 shRNA Plasmid (h): sc-106653-SH, UBA52 shRNA Plasmid (m): sc-154840-SH, UBA52 shRNA (h) Lentiviral Particles: sc-106653-V and UBA52 shRNA (m) Lentiviral Particles: sc-154840-V.

Molecular Weight of UBA52: 15 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) 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.

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 or our catalog for detailed protocols and support products.