SANTA CRUZ BIOTECHNOLOGY, INC.

UPase (M-20): sc-23742

BACKGROUND

Uridine, a pyrimidine nucleoside essential for the synthesis of RNA and biomembranes, is a crucial element in the regulation of normal physiological processes as well as pathological states. Uridine phosphorylase (UP, UDPase) catalyses the reversible phosphorolysis of uridine to uracil. The reaction products are then utilized as carbon and energy sources, or in the rescue of pyrimidine bases for nucleotide synthesis. In most mammalian cells, two different pyrimidine nucleoside phosphorylases exist, uridine phosphorylase and thymidine phosphorylase (TP), which, in the presence of orthophosphate, catalyze the reversible conversion of pyrimidine (deoxy) riboside to pyrimidine base and (deoxy) ribose-1-phosphate. The expression levels and the enzymatic activity of UPase are higher in human solid tumors than in adjacent normal tissues. In addition, UPase controls the homeostatic regulation of uridine concentration in plasma and tissues and plays a role in the intracellular activation of 5-fluorouracil.

REFERENCES

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3. Pizzorno, G., Cao, D., Leffert, J.J., Russell, R.L., Zhang, D. and Handschumacher, R.E. 2002. Homeostatic control of uridine and the role of uridine phosphorylase: a biological and clinical update. Biochim. Biophys. Acta 1587: 133-144.
4. Haraguchi, M., Tsujimoto, H., Fukushima, M., Higuchi, I., Kuribayashi, H., Utsumi, H., Nakayama, A., Hashizume, Y., Hirato, J., Yoshida, H., et al. 2002. Targeted deletion of both thymidine phosphorylase and uridine phosphorylase and consequent disorders in mice. Mol. Cell. Biol. 22: 5212-5221.
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CHROMOSOMAL LOCATION

Genetic locus: Upp1 (mouse) mapping to 11 A1.

SOURCE

UPase (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of UPase of mouse origin.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-23742 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UPase (M-20) is recommended for detection of UPase of 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).

Suitable for use as control antibody for UPase siRNA (m): sc-41088, UPase shRNA Plasmid (m): sc-41088-SH and UPase shRNA (m) Lentiviral Particles: sc-41088-V.

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.

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.