

UMPS (m): 293T Lysate: sc-124466

BACKGROUND

Uridine 5'-monophosphate synthase (UMPS) catalyzes the last two steps of the pyrimidine biosynthetic pathway. Unlike prokaryotes, UMPS in eukaryotes combines the orotate phosphoribosyltransferase and the orotidine-5'-monophosphate (OMP) decarboxylase activities into a single protein. The union of these two enzymes is thought to stabilize the catalytic centers due to the low molar concentration of the protein in mammalian cells. Loss of either enzymatic activity results in hereditary orotic aciduria, a rare autosomal recessive disorder characterized by retarded growth, anemia, and excessive urinary excretion of orotic acid. Two isoforms of UMPS exist as a result of alternative splicing events.

REFERENCES

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5. Brosnan, M.E. and Brosnan, J.T. 2007. Orotic acid excretion and arginine metabolism. *J. Nutr.* 137: 1656S-1661S.
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CHROMOSOMAL LOCATION

Genetic locus: *Umps* (mouse) mapping to 16 B3.

PRODUCT

UMPS (m): 293T Lysate represents a lysate of mouse UMPS transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

UMPS (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive UMPS antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

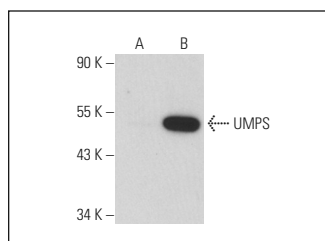
UMPS (3H6): sc-135596 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse UMPS expression in UMPS transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



UMPS (3H6): sc-135596. Western blot analysis of UMPS expression in non-transfected: sc-117752 (A) and mouse UMPS transfected: sc-124466 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.