

CMAS (m): 293T Lysate: sc-119320

BACKGROUND

CMAS (cytidine monophosphate N-acetylneuraminic acid synthetase), also known as CMP-NeuNAc synthetase or CMP-sialic acid synthetase, is a ubiquitously expressed 434 amino acid protein involved in sialic acid metabolism. Localizing to the nucleus, the evolutionarily conserved enzyme CMAS functions as a homotetramer and catalyzes the production of cytidine 5'-monophosphate N-acetylneuraminic acid (CMP-NeuNAc) from N-acetylneuraminic acid and CTP. The generation of CMP-NeuNAc is an important reaction because CMP-NeuNAc is an essential donor substrate used by sialyltransferases for the addition of sialic acid to hydroxyl groups at the terminal end of glycoproteins, polysaccharides and glycolipids. Proteins with this post-translational modification play an important role in the development, structure and function of animal tissues.

REFERENCES

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3. Münster, A.K., et al. 2002. Nuclear localization signal of murine CMP-Neu5Ac synthetase includes residues required for both nuclear targeting and enzymatic activity. *J. Biol. Chem.* 277: 19688-19696.
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5. Viswanathan, K., et al. 2006. Expression of a functional *Drosophila melanogaster* CMP-sialic acid synthetase. Differential localization of the *Drosophila* and human enzymes. *J. Biol. Chem.* 281: 15929-15940.
6. Mizanur, R.M. and Pohl, N.L. 2007. Cloning and characterization of a heat-stable CMP-N-acetylneuraminic acid synthetase from *Clostridium thermocellum*. *Appl. Microbiol. Biotechnol.* 76: 827-834.
7. Tiralongo, J., et al. 2007. The rainbow trout CMP-sialic acid synthetase utilizes a nuclear localization signal different from that identified in the mouse enzyme. *Glycobiology* 17: 945-954.
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CHROMOSOMAL LOCATION

Genetic locus: Cmas (mouse) mapping to 6 G3.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

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

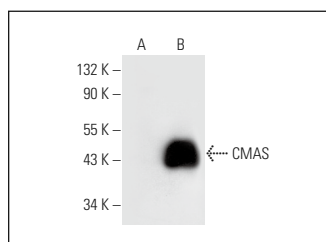
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CMAS (E-8): sc-398296 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse CMAS expression in CMAS 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



CMAS (E-8): sc-398296. Western blot analysis of CMAS expression in non-transfected: sc-117752 (A) and mouse CMAS transfected: sc-119320 (B) 293T whole cell lysates.

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.