

MOSC2 (L-13): sc-138034

BACKGROUND

MOSC2 (MOCO sulphurase C-terminal domain containing 2) is a 335 amino acid peripheral membrane protein that localizes to the mitochondria. Containing a MOSC domain, MOSC2 utilizes molybdenum as a cofactor and is a component of the benzamidoxime prodrug-converting complex that is comprised of cytochrome b5, NADH-cytochrome b5 reductase (CYB5R3). CYB5R3 belongs to the flavoprotein pyridine nucleotide cytochrome reductase family and is involved in the desaturation and elongation of fatty acids, cholesterol biosynthesis, drug metabolism and, in erythrocytes, methemoglobin reduction. Benzamidoxime prodrug-converting complex is required to reduce N-hydroxylated structures, such as benzamidoxime prodrug. MOSC2 exists as two alternatively spliced isoforms and is encoded by a gene mapping to human chromosome 1q41.

REFERENCES

1. Clement, B. 2002. Reduction of N-hydroxylated compounds: amidoximes (N-hydroxyamidines) as pro-drugs of amidines. *Drug Metab. Rev.* 34: 565-579.
2. Porter, T.D. 2002. The roles of cytochrome b5 in cytochrome P450 reactions. *J. Biochem. Mol. Toxicol.* 16: 311-316.
3. Schenkman, J.B. and Jansson, I. 2003. The many roles of cytochrome b5. *Pharmacol. Ther.* 97: 139-152.
4. Percy, M.J., et al. 2005. Recessive congenital methaemoglobinaemia: functional characterization of the novel D239G mutation in the NADH-binding lobe of cytochrome b5 reductase. *Br. J. Haematol.* 129: 847-853.
5. Havemeyer, A., et al. 2006. Identification of the missing component in the mitochondrial benzamidoxime prodrug-converting system as a novel molybdenum enzyme. *J. Biol. Chem.* 281: 34796-34802.

CHROMOSOMAL LOCATION

Genetic locus: MOSC2 (human) mapping to 1q41.

SOURCE

MOSC2 (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MOSC2 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-138034 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.

PROTOCOLS

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

APPLICATIONS

MOSC2 (L-13) is recommended for detection of MOSC2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 MOSC1.

Suitable for use as control antibody for MOSC2 siRNA (h): sc-88738, MOSC2 shRNA Plasmid (h): sc-88738-SH and MOSC2 shRNA (h) Lentiviral Particles: sc-88738-V.

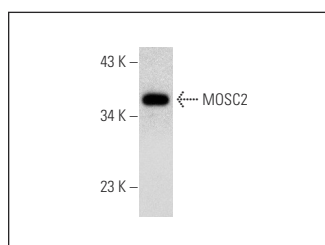
Molecular Weight of MOSC2: 38 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

DATA



MOSC2 (L-13): sc-138034. Western blot analysis of MOSC2 expression in HeLa whole cell lysate.

RESEARCH USE

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