

MOCS3 (37-X): sc-100562

BACKGROUND

Molybdenum is an essential trace element found in most organisms and it functions as a cofactor for several enzymes that catalyze important transformations in carbon, nitrogen and sulfur metabolism. The molybdenum cofactor biosynthetic pathway is evolutionarily conserved between organisms. MOCS3 (molybdenum cofactor synthesis protein 3), also known as UBA4, molybdopterin synthase sulfurylase or MPT synthase sulfurylase, belongs to the hesA/moeB/thiF family and is necessary for the function of all molybdoenzymes. MOCS3 is thought to activate molybdopterin synthase by adenylating its smaller subunit at the C-terminus during molybdopterin biosynthesis in humans. Molybdopterin synthase catalyzes the formation of molybdopterin by incorporating a dithiolene functional group. Molybdenum cofactor deficiency in humans results in the loss of the activity of molybdoenzymes sulfite oxidase, xanthine dehydrogenase and aldehyde oxidase which leads to progressive neurological damage. All forms of molybdenum cofactor deficiency are inherited as autosomal recessive traits.

REFERENCES

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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: MOCS3 (human) mapping to 20q13.13.

SOURCE

MOCS3 (37-X) is a mouse monoclonal antibody raised against recombinant MOCS3 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MOCS3 (37-X) is recommended for detection of MOCS3 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MOCS3 siRNA (h): sc-75807, MOCS3 shRNA Plasmid (h): sc-75807-SH and MOCS3 shRNA (h) Lentiviral Particles: sc-75807-V.

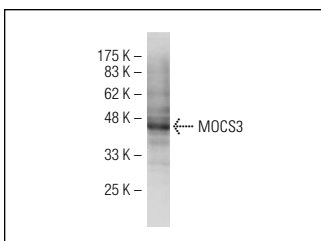
Molecular Weight of MOCS3: 50 kDa.

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

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



MOCS3 (37-X): sc-100562. Western blot analysis of MOCS3 expression in HeLa whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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