

# MOCS3 (N-20): sc-85764

## 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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## CHROMOSOMAL LOCATION

Genetic locus: MOCS3 (human) mapping to 20q13.13; Mocs3 (mouse) mapping to 2 H3.

## SOURCE

MOCS3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MOCS3 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-85764 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MOCS3 (N-20) is recommended for detection of MOCS3 of mouse, rat and human 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 MOCS3 siRNA (h): sc-75807, MOCS3 siRNA (m): sc-149496, MOCS3 shRNA Plasmid (h): sc-75807-SH, MOCS3 shRNA Plasmid (m): sc-149496-SH, MOCS3 shRNA (h) Lentiviral Particles: sc-75807-V and MOCS3 shRNA (m) Lentiviral Particles: sc-149496-V.

Molecular Weight of MOCS3: 50 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **MOCS3 (37-X): sc-100562**, our highly recommended monoclonal alternative to MOCS3 (N-20).