SANTA CRUZ BIOTECHNOLOGY, INC.

MOCS1 (G-6): sc-398094

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Molybdenum is an essential trace element found in most organisms that functions as a cofactor for several enzymes. Molybdenum catalyzes important transformations in carbon, nitrogen and sulfur metabolism. The molybdenum cofactor biosynthetic pathway is evolutionarily conserved between organisms. MOCS1 (molybdenum cofactor synthesis 1), also known as molybdenum cofactor synthesis-step 1 protein A-B, cell migration-inducing gene 11 protein, MOCOD or MIG11, is a 636 amino acid protein that exists as eight widely expressed isoforms, two of which (designated MOCS1A and MOCS1B) form a heterooligomer. MOCS1 plays a role in molybdenum cofactor and molybdopterin biosynthesis, and mutations in the MOCS1 gene are linked to an autosomal recessive disease known as molybdenum cofactor deficiency type A (MOCOD type A), which is characterized by early childhood death, neurological damage and neonatal seizures.

REFERENCES

1. van Gennip, A.H., et al. 1994. Effect of allopurinol on the xanthinuria in a patient with molybdenum cofactor deficiency. Adv. Exp. Med. Biol. 370: 375-378.
2. Shalata, A., et al. 1998. Localization of a gene for molybdenum cofactor deficiency, on the short arm of chromosome 6, by homozygosity mapping. Am. J. Hum. Genet. 63: 148-154.
3. Reiss, J., et al. 1998. Genomic structure and mutational spectrum of the bicistronic MOCS1 gene defective in molybdenum cofactor deficiency type A. Hum. Genet. 103: 639-644.
4. Reiss, J., et al. 1998. Mutations in a polycistronic nuclear gene associated with molybdenum cofactor deficiency. Nat. Genet. 20: 51-53.
5. Reiss, J., et al. 1999. Human molybdopterin synthase gene: genomic structure and mutations in molybdenum cofactor deficiency type B. Am. J. Hum. Genet. 64: 706-711.

CHROMOSOMAL LOCATION

Genetic locus: MOCS1 (human) mapping to 6p21.2; Mocs1 (mouse) mapping to 17 C.

SOURCE

MOCS1 (G-6) is a mouse monoclonal antibody raised against amino acids 87-385 mapping at the C-terminus of MOCS1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MOCS1 (G-6) is available conjugated to agarose (sc-398094 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398094 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398094 PE), fluorescein (sc-398094 FITC), Alexa Fluor® 488 (sc-398094 AF488), Alexa Fluor® 546 (sc-398094 AF546), Alexa Fluor® 594 (sc-398094 AF594) or Alexa Fluor® 647 (sc-398094 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398094 AF680) or Alexa Fluor® 790 (sc-398094 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MOCS1 (G-6) is recommended for detection of MOCS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for MOCS1 siRNA (h): sc-95639, MOCS1 siRNA (m): sc-149495, MOCS1 shRNA Plasmid (h): sc-95639-SH, MOCS1 shRNA Plasmid (m): sc-149495-SH, MOCS1 shRNA (h) Lentiviral Particles: sc-95639-V and MOCS1 shRNA (m) Lentiviral Particles: sc-149495-V.

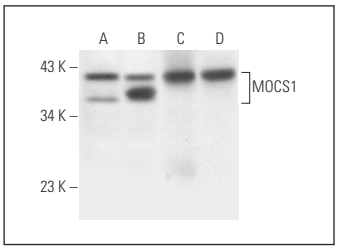
Molecular Weight of MOCS1: 70 kDa.

Positive Controls: human liver extract: sc-363766, T24 cell lysate: sc-2292 or mouse liver extract: sc-2256.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MOCS1 (G-6): sc-398094. Western blot analysis of MOCS1 expression in T24 (**A**) and U-251-MG (**B**) whole cell lysates and mouse liver (**C**) and human liver (**D**) tissue extracts.

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.