

MARS2 (7C3): sc-293382

BACKGROUND

MARS2 (methionyl-tRNA synthetase 2, mitochondrial), also known as MetRS or MtMetRS, is a 593 amino acid mitochondrial matrix protein that belongs to the class-I aminoacyl-tRNA synthetase family. MARS2 functions at an optimal pH of 7.8 to 8.2 and contains HIGH and KMSKS motifs, both of which are signature sequences found in all class I synthetases. The gene encoding MARS2 maps to human chromosome 2q33.1. Consisting of of 237 million bases and encoding over 1,400 genes, chromosome 2 is the second largest human chromosome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene.

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: MARS2 (human) mapping to 2q33.1.

SOURCE

MARS2 (7C3) is a mouse monoclonal antibody raised against amino acids 1-106 of MARS2 of human origin.

PRODUCT

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

APPLICATIONS

MARS2 (7C3) is recommended for detection of MARS2 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 MARS2 siRNA (h): sc-94997, MARS2 shRNA Plasmid (h): sc-94997-SH and MARS2 shRNA (h) Lentiviral Particles: sc-94997-V.

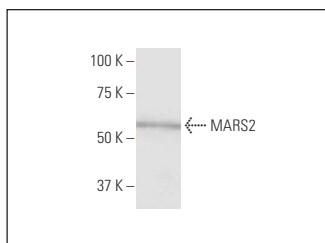
Molecular Weight of MARS2: 67 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

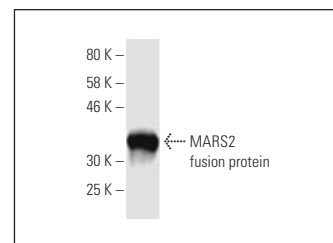
RECOMMENDED SUPPORT REAGENTS

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



MARS2 (7C3): sc-293382. Western blot analysis of MARS2 expression in MCF7 whole cell lysate.



MARS2 (7C3): sc-293382. Western blot analysis of human recombinant MARS2 fusion protein.

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.