

Metaxin 2 (H-2): sc-514231

BACKGROUND

Metaxin 2, also known as mitochondrial outer membrane import complex protein 2 or MTX2, is a 263 amino acid protein that interacts with Metaxin 1 and assists in the transport of proteins into mitochondria, where it localizes to the outer membrane. A member of the Metaxin family, Metaxin 2 is encoded by a gene that maps to human chromosome 2q31.1. Consisting of 237 million bases, chromosome 2 encodes over 1,400 genes and makes up approximately 8% of the human genome. 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

1. Armstrong, L.C., et al. 1999. Metaxin 1 interacts with Metaxin 2, a novel related protein associated with the mammalian mitochondrial outer membrane. *J. Cell. Biochem.* 74: 11-22.
2. Zumsteg, U., et al. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. *J. Med. Genet.* 37: E8.
3. Shulenin, S., et al. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (White) gene subfamily maps to human chromosome 2p21 in the region of the Sitosterolemia locus. *Cytogenet. Cell Genet.* 92: 204-208.

CHROMOSOMAL LOCATION

Genetic locus: MTX2 (human) mapping to 2q31.1; Mtx2 (mouse) mapping to 2 C3.

SOURCE

Metaxin 2 (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 244-263 at the C-terminus of Metaxin 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Metaxin 2 (H-2) is available conjugated to agarose (sc-514231 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514231 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514231 PE), fluorescein (sc-514231 FITC), Alexa Fluor® 488 (sc-514231 AF488), Alexa Fluor® 546 (sc-514231 AF546), Alexa Fluor® 594 (sc-514231 AF594) or Alexa Fluor® 647 (sc-514231 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514231 AF680) or Alexa Fluor® 790 (sc-514231 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514231 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

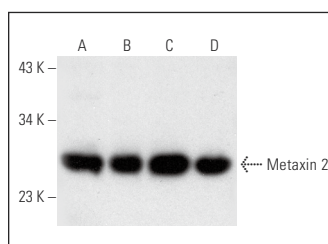
Metaxin 2 (H-2) is recommended for detection of Metaxin 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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 Metaxin 2 siRNA (h): sc-95035, Metaxin 2 siRNA (m): sc-149376, Metaxin 2 shRNA Plasmid (h): sc-95035-SH, Metaxin 2 shRNA Plasmid (m): sc-149376-SH, Metaxin 2 shRNA (h) Lentiviral Particles: sc-95035-V and Metaxin 2 shRNA (m) Lentiviral Particles: sc-149376-V.

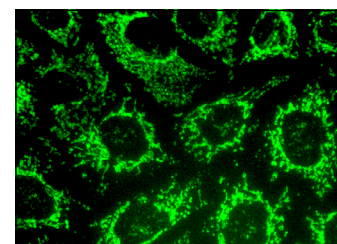
Molecular Weight of Metaxin 2: 30 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or RT-4 whole cell lysate: sc-364257.

DATA



Metaxin 2 (H-2): sc-514231. Western blot analysis of Metaxin 2 expression in A-431 (A), Jurkat (B), MDA-MB-435S (C) and RT-4 (D) whole cell lysates.



Metaxin 2 (H-2): sc-514231. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization.

SELECT PRODUCT CITATIONS

1. Zhao, Y., et al. 2021. Metaxins are core components of mitochondrial transport adaptor complexes. *Nat. Commun.* 12: 83.
2. Abudu, Y.P., et al. 2021. SAMM50 acts with p62 in piecemeal basal- and OXPHOS-induced mitophagy of SAM and MICOS components. *J. Cell Biol.* 220: e202009092.
3. Monteiro-Cardoso, V.F., et al. 2022. ORP5/8 and MIB/MICOS link ER-mitochondria and intra-mitochondrial contacts for non-vesicular transport of phosphatidylserine. *Cell Rep.* 40: 111364.
4. Coscia, S.M., et al. 2023. Myo19 tethers mitochondria to endoplasmic reticulum-associated Actin to promote mitochondrial fission. *J. Cell Sci.* 136: jcs260612.

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.