SANTA CRUZ BIOTECHNOLOGY, INC.

# Metaxin 1 (G-7): sc-514469

## BACKGROUND

Metaxin 1, also known as Mtx or Gcap6, is a 317 amino acid member of the Metaxin protein family. Localized to the mitochondrion outer membrane, Metaxin 1 is involved in the transport of proteins into the mitochondrion. Metaxin 1 is also believed to be essential for embryonic development. Metaxin 1 has been found to interact with other Metaxin family members, including Metaxin 2. Although ubiquitously expressed, highest levels of Metaxin 1 are present in kidney. The gene that encodes Metaxin 1 maps to human chromosome 1, which is the largest human chromosome, spanning about 260 million base pairs and making up 8% of the human genome.

## CHROMOSOMAL LOCATION

Genetic locus: MTX1 (human) mapping to 1q22.

## SOURCE

Metaxin 1 (G-7) is a mouse monoclonal antibody raised against amino acids 362-412 mapping near the C-terminus of Metaxin 1 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.

Metaxin 1 (G-7) is available conjugated to agarose (sc-514469 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514469 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514469 PE), fluorescein (sc-514469 FITC), Alexa Fluor® 488 (sc-514469 AF488), Alexa Fluor® 546 (sc-514469 AF546), Alexa Fluor® 594 (sc-514469 AF594) or Alexa Fluor® 647 (sc-514469 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514469 AF680) or Alexa Fluor® 790 (sc-514469 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## STORAGE

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

## APPLICATIONS

Metaxin 1 (G-7) is recommended for detection of Metaxin 1 of 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 1 siRNA (h): sc-88250, Metaxin 1 shRNA Plasmid (h): sc-88250-SH and Metaxin 1 shRNA (h) Lentiviral Particles: sc-88250-V.

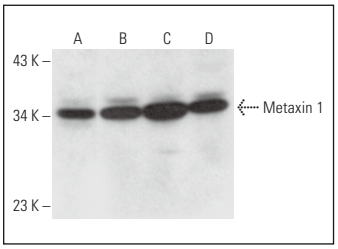
Molecular Weight of Metaxin 1: 35 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200.

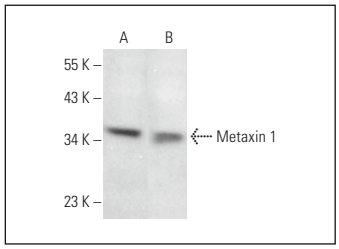
## RECOMMENDED SUPPORT REAGENTS

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). 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




Metaxin 1 (G-7): sc-514469. Western blot analysis of Metaxin 1 expression in NTERA-2 cl.D1 (**A**), HeLa (**B**), Jurkat (**C**) and MCF7 (**D**) whole cell lysates.




Metaxin 1 (G-7): sc-514469. Western blot analysis of Metaxin 1 expression in MDA-MB-231 (**A**) and JAR (**B**) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Kelly, F.D., et al. 2017. *Toxoplasma gondii* MAF1b binds the host cell MIB complex to mediate mitochondrial association. mSphere 2: e00183-17.
2. Elouej, S., et al. 2020. Loss of MTX2 causes mandibuloacral dysplasia and links mitochondrial dysfunction to altered nuclear morphology. Nat. Commun. 11: 4589.
3. Zhao, Y., et al. 2021. Metaxins are core components of mitochondrial transport adaptor complexes. Nat. Commun. 12: 83.
4. 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.

## 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.