

mtp110 (2G2): sc-58807

BACKGROUND

Mitochondria are eukaryotic organelles that convert organic materials into energy in the form of ATP via the process of oxidative phosphorylation. Mitochondria also play important roles in apoptosis, cellular proliferation, regulation of the cellular redox state, heme and steroid synthesis, and glutamate-mediated excitotoxic neuronal injury. A typical cell has hundreds to thousands of mitochondria, each of which contain their own sets of DNA. Mitochondria also have unique proteins that can be used as mitochondrial markers. Mitochondrial protein p110, or mtp110, is a mitochondrial marker protein of the inner membrane. The use of markers such as mtp110 help in the investigation of mitochondrial relationships with other cellular structures. mtp110 copartitions with another mitochondrial protein, HSP 60, during mitochondrial isolation from HeLa cells.

REFERENCES

1. Jackson, A.E. and De Kretser, D.M. 1991. Ultrastructural immunoperoxidase investigations of HCG binding to isolated testicular intertubular cells. *Histochem. J.* 23: 517-528.
2. Bringaud, F., et al. 1997. Mitochondrial glutamate dehydrogenase from *Leishmania tarentolae* is a guide RNA-binding protein. *Mol. Cell. Biol.* 17: 3915-3923.
3. Paulin-Levasseur, M., et al. 1998. The 2G2 antibody recognizes an acidic 110 kDa human mitochondrial protein. *Histochem. J.* 30: 617-625.
4. Kovacs, J.A., et al. 2001. New insights into transmission, diagnosis and drug treatment of *Pneumocystis carinii* pneumonia. *JAMA* 286: 2450-2460.
5. Zhu, J.H., et al. 2003. Localization of phosphorylated ERK/MAP kinases to mitochondria and autophagosomes in Lewy body diseases. *Brain Pathol.* 13: 473-481.
6. Sundararajan, R., et al. 2005. Caspase-dependent processing activates the proapoptotic activity of deleted in breast cancer-1 during tumor necrosis factor α -mediated death signaling. *Oncogene* 24: 4908-4920.
7. Condo, I., et al. 2006. A pool of extramitochondrial frataxin that promotes cell survival. *J. Biol. Chem.* 281: 16750-16756.

SOURCE

mtp110 (2G2) is a mouse monoclonal antibody raised against recombinant full length mtp110 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

mtp110 (2G2) is available conjugated to agarose (sc-58807 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58807 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58807 PE), fluorescein (sc-58807 FITC), Alexa Fluor® 488 (sc-58807 AF488), Alexa Fluor® 546 (sc-58807 AF546), Alexa Fluor® 594 (sc-58807 AF594) or Alexa Fluor® 647 (sc-58807 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-58807 AF680) or Alexa Fluor® 790 (sc-58807 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

mtp110 (2G2) is recommended for detection of mtp110 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

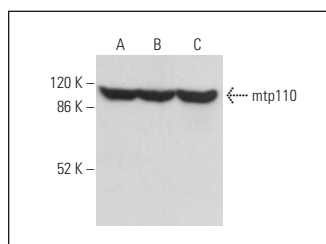
Molecular Weight of mtp110: 110 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SJRH30 cell lysate: sc-2287 or A549 cell lysate: sc-2413.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



mtp110 (2G2): sc-58807. Western blot analysis of mtp110 expression in HeLa (A), SJRH30 (B) and A549 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Shin, H.J., et al. 2019. Pink1-mediated chondrocytic mitophagy contributes to cartilage degeneration in osteoarthritis. *J. Clin. Med.* 8: 1849.

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 for detailed protocols and support products.

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