



MTP18 (m2): 293T Lysate: sc-125656

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. MTP18 (mitochondrial 18 kDa protein), also known as HSPC242, is a 166 amino acid protein essential for cell viability. MTP18 may also have a role in maintaining the integrity of the mitochondrial network. Localized to the mitochondrion, expression of MTP18 is regulated by the PI 3-kinase pathway. Loss of function of MTP18 results in the release of cytochrome c, which subsequently activates the caspase cascade and leads to apoptosis.

REFERENCES

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2. Collins, J.E., et al. 2004. A genome annotation-driven approach to cloning the human ORFeome. *Genome Biol.* 5: R84.
3. Tondera, D., et al. 2004. Knockdown of MTP18, a novel phosphatidylinositol 3-kinase-dependent protein, affects mitochondrial morphology and induces apoptosis. *J. Biol. Chem.* 279: 31544-31555.
4. Cheng, J., et al. 2005. Transcriptional maps of 10 human chromosomes at 5-nucleotide resolution. *Science* 308: 1149-1154.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610235. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: 1700020C11Rik (mouse) mapping to 11 A1.

PRODUCT

MTP18 (m2): 293T Lysate represents a lysate of mouse MTP18 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

MTP18 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive MTP18 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.