

LETM1 (H-300): sc-134672

BACKGROUND

LETM1 (leucine zipper-EF-hand-containing transmembrane protein 1, mitochondrial) is a 739 amino acid protein that localizes to the mitochondrial membrane and contains one LETM1 domain and 2 EF-hand calcium-binding domains. Expressed in all fetal and adult tissues, LETM1 has a leucine zipper motif, a transmembrane domain and several phosphorylation sites and, via its EF-hand domains, may function as a calcium-binding protein. Additionally, LETM1 is thought to be involved in maintaining normal mitochondrial function and overall cell viability. Human LETM1 shares 84% similarity with its mouse counterpart, suggesting a conserved role between species. Deletions in the gene encoding LETM1 are associated with Wolf-Hirschhorn syndrome (WHS), a congenital syndrome characterized by a number of abnormalities, including mental retardation, seizures, heart defects, fused teeth, hearing loss, a webbed neck and renal abnormalities.

REFERENCES

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- Rauch, A., et al. 2001. First known microdeletion within the Wolf-Hirschhorn syndrome critical region refines genotype-phenotype correlation. *Am. J. Med. Genet.* 99: 338-342.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604407. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Zollino, M., et al. 2003. Mapping the Wolf-Hirschhorn syndrome phenotype outside the currently accepted WHS critical region and defining a new critical region, WHSCR-2. *Am. J. Hum. Genet.* 72: 590-597.
- Schlickum, S., et al. 2004. LETM1, a gene deleted in Wolf-Hirschhorn syndrome, encodes an evolutionarily conserved mitochondrial protein. *Genomics* 83: 254-261.
- Nowikovsky, K., et al. 2004. The LETM1/YOL027 gene family encodes a factor of the mitochondrial K⁺ homeostasis with a potential role in the Wolf-Hirschhorn syndrome. *J. Biol. Chem.* 279: 30307-30315.

CHROMOSOMAL LOCATION

Genetic locus: LETM1 (human) mapping to 4p16.3; Letm1 (mouse) mapping to 5 B2.

SOURCE

LETM1 (H-300) is a rabbit polyclonal antibody raised against amino acids 440-739 mapping at the C-terminus of LETM1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

LETM1 (H-300) is recommended for detection of LETM1 of mouse, rat and 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)], 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 LETM1 siRNA (h): sc-89079, LETM1 siRNA (m): sc-146712, LETM1 shRNA Plasmid (h): sc-89079-SH, LETM1 shRNA Plasmid (m): sc-146712-SH, LETM1 shRNA (h) Lentiviral Particles: sc-89079-V and LETM1 shRNA (m) Lentiviral Particles: sc-146712-V.

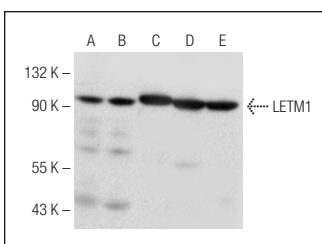
Molecular Weight of LETM1: 85 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or Jurkat whole cell lysate: sc-2204.

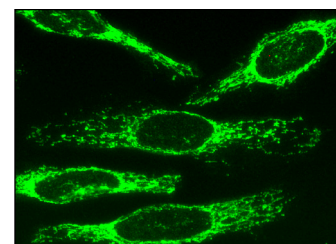
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



LETM1 (H-300): sc-134672. Western blot analysis of LETM1 expression in HeLa (A), A549 (B), Jurkat (C), MOLT-4 (D) and ECV304 (E) whole cell lysates.



LETM1 (H-300): sc-134672. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization.

STORAGE

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


 MONOS
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Try **LETM1 (D-5): sc-271235** or **LETM1 (D-11): sc-514136**, our highly recommended monoclonal alternatives to LETM1 (H-300).