

# MPV17L (L-13): sc-136755

## BACKGROUND

MPV17L (MPV17 mitochondrial membrane protein-like), also known as MLPH1, MLPH2 or MPV17L1, is a 196 amino acid multi-pass membrane protein belonging to the peroxisomal membrane protein PXPMP2/4 family. M-LPS (also known as M-LPH1) and M-LPL (also known as M-LPH2) are alternatively spliced isoforms of MPV17L and are ubiquitously expressed in human tissues, however only M-LPS exists at the protein level and mainly resides in kidney. MPV17L may be involved in protecting against mitochondrial oxidative stress and apoptosis, and participates in reactive oxygen species (ROS) metabolism by up- or down-regulating genes of antioxidant enzymes. MPV17L may play a role in the development of early-onset glomerulosclerosis, which is the hardening or formation of scar tissue of the glomerulus in the kidney.

## REFERENCES

1. Iida, R., et al. 2001. Cloning, mapping, genomic organization, and expression of mouse M-LP, a new member of the peroxisomal membrane protein Mpv17 domain family. *Biochem. Biophys. Res. Commun.* 283: 292-296.
2. Iida, R., et al. 2003. M-LP, Mpv17-like protein, has a peroxisomal membrane targeting signal comprising a transmembrane domain and a positively charged loop and up-regulates expression of the manganese superoxide dismutase gene. *J. Biol. Chem.* 278: 6301-6306.
3. Schrader, M. and Fahimi, H.D. 2004. Mammalian peroxisomes and reactive oxygen species. *Histochem. Cell Biol.* 122: 383-393.
4. Iida, R., et al. 2005. A novel alternative spliced Mpv17-like protein isoform localizes in cytosol and is expressed in a kidney- and adult-specific manner. *Exp. Cell Res.* 302: 22-30.
5. Iida, R., et al. 2006. Human Mpv17-like protein is localized in peroxisomes and regulates expression of antioxidant enzymes. *Biochem. Biophys. Res. Commun.* 344: 948-954.
6. Spinazzola, A., et al. 2006. MPV17 encodes an inner mitochondrial membrane protein and is mutated in infantile hepatic mitochondrial DNA depletion. *Nat. Genet.* 38: 570-575.
7. Wong, L.J., et al. 2007. Mutations in the MPV17 gene are responsible for rapidly progressive liver failure in infancy. *Hepatology* 46: 1218-1227.
8. Krick, S., et al. 2008. MPV17L protects against mitochondrial oxidative stress and apoptosis by activation of Omi/HtrA2 protease. *Proc. Natl. Acad. Sci. USA* 105: 14106-14111.
9. Magoulas, C., et al. 2009. Prediction of novel isoforms of the mouse MPV17L protein. *Genome* 52: 968-974.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: MPV17L (human) mapping to 16p13.11.

## SOURCE

MPV17L (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MPV17L 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.

Blocking peptide available for competition studies, sc-136755 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MPV17L (L-13) is recommended for detection of MPV17L isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with MPV17.

Suitable for use as control antibody for MPV17L siRNA (h): sc-93329, MPV17L shRNA Plasmid (h): sc-93329-SH and MPV17L shRNA (h) Lentiviral Particles: sc-93329-V.

Molecular Weight of MPV17L isoform 1: 20 kDa.

Molecular Weight of MPV17L isoform 2: 10 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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