

TMEM70 (K-16): sc-87472

BACKGROUND

TMEM70 (transmembrane protein 70) is a 260 amino acid multi-pass mitochondrial membrane protein that exists as multiple alternatively spliced isoforms which are expressed in pancreas, liver, muscle and kidney tissue. Mutations in the gene encoding TMEM70 are associated with ATP synthase deficiency and neonatal mitochondrial encephalomyopathy, suggesting that TMEM70 plays an important role in ADP-stimulated respiration, mitochondrial ATP synthesis, ATP hydrolysis and the maintenance of membrane potential. The gene encoding TMEM70 maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

REFERENCES

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2. Calvo, S., et al. 2006. Systematic identification of human mitochondrial disease genes through integrative genomics. *Nat. Genet.* 38: 576-582.
3. Cízková, A., et al. 2008. TMEM70 mutations cause isolated ATP synthase deficiency and neonatal mitochondrial encephalomyopathy. *Nat. Genet.* 40: 1288-1290.
4. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612418. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Houstk, J., et al. 2009. TMEM70 protein-A novel ancillary factor of mammalian ATP synthase. *Biochim. Biophys. Acta* 1787: 529-532.
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CHROMOSOMAL LOCATION

Genetic locus: TMEM70 (human) mapping to 8q21.11; Tmem70 (mouse) mapping to 1 A3.

SOURCE

TMEM70 (K-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TMEM70 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

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.

APPLICATIONS

TMEM70 (K-16) is recommended for detection of TMEM70 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); non cross-reactive with TMEM family members.

TMEM70 (K-16) is also recommended for detection of TMEM70 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TMEM70 siRNA (h): sc-77756, TMEM70 siRNA (m): sc-154495, TMEM70 shRNA Plasmid (h): sc-77756-SH, TMEM70 shRNA Plasmid (m): sc-154495-SH, TMEM70 shRNA (h) Lentiviral Particles: sc-77756-V and TMEM70 shRNA (m) Lentiviral Particles: sc-154495-V.

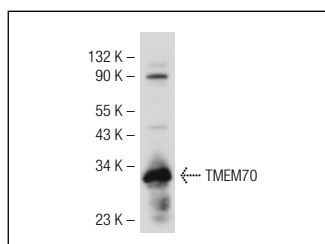
Molecular Weight of TMEM70 isoforms: 29/19 kDa.

Positive Controls: mouse lymph node extract: sc-364243, OV-90 whole cell lysate: sc-364191 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 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



TMEM70 (K-16): sc-87472. Western blot analysis of TMEM70 expression in mouse lymph node tissue extract.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.