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TMEM70 Antibody
Catalog # ASC11085

Specification

TMEM70 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q9BUB7
Other Accession	NP_060336, 34147498
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**TMEM70 antibody can be used for detection of TMEM70 by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

TMEM70 Antibody - Additional Information

Gene ID	**54968**

Target/Specificity
TMEM70;

Reconstitution & Storage
TMEM70 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
TMEM70 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TMEM70 Antibody - Protein Information

Name TMEM70 (HGNC:26050)

Function
Scaffold protein that participates in the c-ring assembly of mitochondrial ATP synthase (F(1)F(0) ATP synthase or complex V) by facilitating the membrane insertion and oligomer formation of the subunit c/ATP5MC1 through its interaction (PubMed:31652072, PubMed:33753518, PubMed:33359711, PubMed:32275929). Therefore, participates in the early stage of mitochondrial ATP synthase biogenesis and also protects subunit c/ATP5MC1 against intramitochondrial proteolysis (PubMed:33359711, PubMed:18953340, PubMed:<a

href="http://www.uniprot.org/citations/20937241" target="_blank">20937241, PubMed:31652072). In addition, binds the mitochondrial proton-transporting ATP synthase complexes I and may play a role in the stability of its membrane-bound subassemblies (PubMed:32275929).

Cellular Location
Mitochondrion inner membrane; Multi-pass membrane protein. Note=Mostly located within the inner cristae membrane

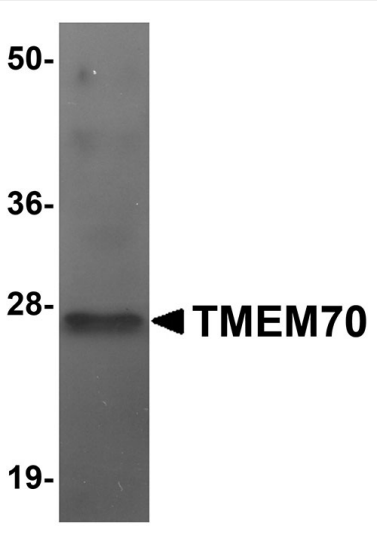
Tissue Location
Lower expressed in the heart than in the liver (at protein level).

TMEM70 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

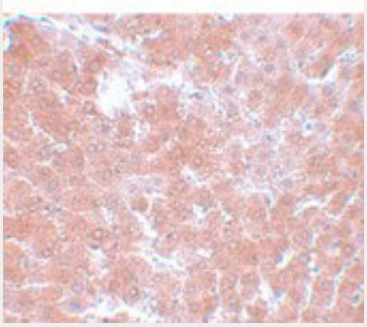
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TMEM70 Antibody - Images

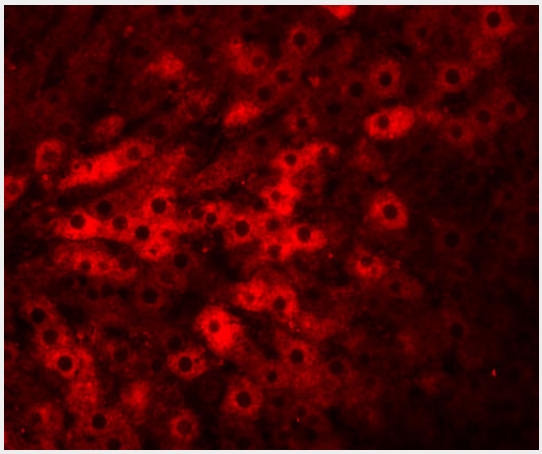


Western blot analysis of TMEM70 in human liver tissue lysate with TMEM70 antibody at 1 µg/mL.

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Immunohistochemistry of TMEM70 in rat liver tissue with TMEM70 antibody at 5 µg/mL.



Immunofluorescence of TMEM70 in rat liver tissue with TMEM70 antibody at 20 µg/mL.

TMEM70 Antibody - Background

TMEM70 Antibody: TMEM70 is a recently identified mitochondrial protein that is thought to play a role in the biogenesis of the ATP synthase in higher eukaryotes. Mutations in this gene result in early neonatal onset of hypotonia, hypertrophic cardiomyopathy, lactic acidos and 3-methylglutaconic aciduria (3-MGC-uria), and usually cause death within the first six weeks of life, although some patients survive much longer. Little is known of the role of TMEM70, but it is conserved across multicellular eukaryotic organisms. It contains a conserved DUF1301 domain and two putative transmembrane regions.

TMEM70 Antibody - References

Cizkova A, Stranecky V, Mayr JA, et al. TMEM70 mutations cause isolated ATP synthase deficiency and neonatal mitochondrial encephalocardiomyopathy. Nat. Genet.2008; 11:1288-90.
Honzik T, Tesarova M, Mayr JA, et al. Mitochondrial encephalocardio-myopathy with early neonatal onset due to TMEM70 mutation. Arch. Dis. Child.2010; 95:296-301.
Houstek J, Kmoch S, and Zeman J. TMEM70 protein - a novel ancillary factor of mammalian ATP synthase. Biochim. Biophys. Acta2009; 1787:529-32.