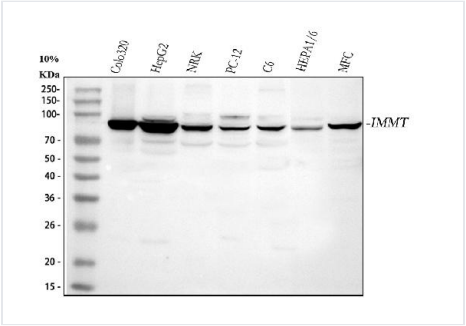
MITOFILIN/IMMT Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

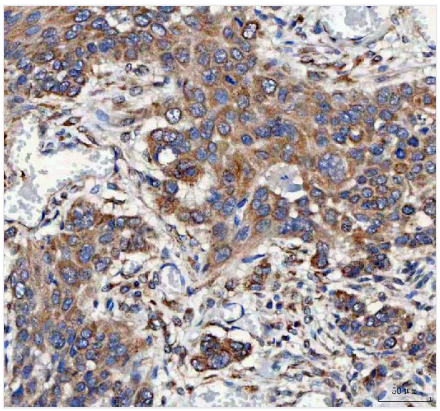
Product Name	Mitofilin/IMMT, Polyclonal Antibody
Full Product Name	Anti-Mitofilin/IMMT Antibody Picoband
Product Gene Name	anti-Mitofilin/IMMT antibody
Product Synonym Names	Serine/threonine-protein kinase AtPK1/AtPK6; 70 kDa ribosomal protein S6 kinase 1 antibody, KS6B1_HUMAN antibody, p70 alpha antibody, P70 beta 1 antibody, p70 ribosomal S6 kinase alpha antibody, p70 ribosomal S6 kinase beta 1 antibody, p70 S6 kinase alpha antibody, P70 S6 Kinase antibody, p70 S6 kinase alpha 1 antibody, p70 S6 kinase alpha 2 antibody, p70 S6K antibody, p70 S6K-alpha antibody, p70 S6KA antibody, p70(S6K) alpha antibody, p70(S6K)-alpha antibody, p70-alpha antibody, p70-S6K 1 antibody, p70-S6K antibody, P70S6K antibody, P70S6K1 antibody, p70S6Kb antibody, PS6K antibody, Ribosomal protein S6 kinase 70kDa polypeptide 1 antibody, Ribosomal protein S6 kinase beta 1 antibody, Ribosomal protein S6 kinase beta-1 antibody, Ribosomal protein S6 kinase I antibody, RPS6KB1 antibody, S6K antibody, S6K-beta-1 antibody, S6K1 antibody, Serine/threonine kinase 14 alpha antibody, Serine/threonine-protein kinase 14A antibody, STK14A antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Expressed in all tissues.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	758
OMIM	600378
3D Structure	ModBase 3D Structure for Q16891
Immunogen	E coli-derived human PDK3 recombinant protein (Position: Y84-Q406). Human PDK3 shares 97.2% amino acid (aa) sequence identity with mouse PDK3.
Subcellular Localization	Cytoplasm, Nucleus
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross reactivity with other proteins.
Protein Function	Downstream effector of TOR signaling pathway involved in osmotic stress response. Could be involved in the control of plant growth and development. Phosphorylates the ribosomal proteins P14, P16 and S6. Functions as a repressor of cell proliferation and required for maintenance of chromosome stability and ploidy levels through the RBR1-E2F pathway.
Product Categories/Family for anti-Mitofilin/IMMT antibody	Primary Antibodies; Signal Transduction; Signaling Pathway; Small G Proteins
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-Mitofilin/IMMT antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS), ELISA (EIA)

Application Notes for anti-Mitofilin/IMMT antibody	WB: 0.25-0.5ug/ml, Human, Mouse, Rat IHC: 2-5ug/ml, Human, Mouse, Rat ICC/IF: 5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-Mitofilin/IMMT antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product References and Citations for anti-Mitofilin/IMMT antibody	1. An, J., Shi, J., He, Q., Lui, K., Liu, Y., Huang, Y., Sheikh, M. S. CHCM1/CHCHD6, novel mitochondrial protein linked to regulation of mitofilin and mitochondrial cristae morphology. J. Biol. Chem. 287: 7411-7426, 2012. 2. Gieffers, C., Korioth, F., Heimann, P., Ungermann, C., Frey, J. Mitofilin is a transmembrane protein of the inner mitochondrial membrane expressed as two isoforms. Exp. Cell. Res. 232: 395-399, 1997. 3. Icho, T., Ikeda, T., Matsumoto, Y., Hanaoka, F., Kaji, K., Tsuchida, N. A novel human gene that is preferentially transcribed in heart muscle. Gene 144: 301-306, 1994.
Other Notes	Small volumes of anti-Mitofilin/IMMT antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Mitofilin/IMMT purchase	MBS1758458 is an antibody targeting Mitofilin/IMMT. Also known as Anti-Mitofilin/IMMT Antibody Picoband. Reactive in Human, Mouse, Rat. Host: Rabbit.



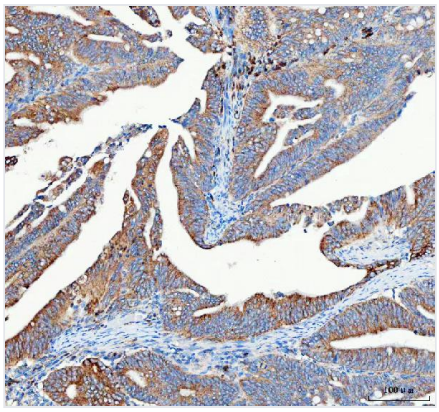
Western Blot (WB) of anti-Mitofilin/IMMT antibody

Figure 1. Western blot analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human Colo320 whole cell lysates,Lane 2: human HepG2 whole cell lysates,Lane 3: rat NRK whole cell lysates,Lane 4: rat PC-12 whole cell lysates,Lane 5: rat C6 whole cell lysates,Lane 6: mouse HEPA1/6 whole cell lysates,Lane 7: mouse MFC whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Mitofilin/IMMT antigen affinity purified polyclonal antibody (#MBS1758458) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for Mitofilin/IMMT at approximately 80-90 kDa. The expected band size for Mitofilin/IMMT is at 84 kDa.



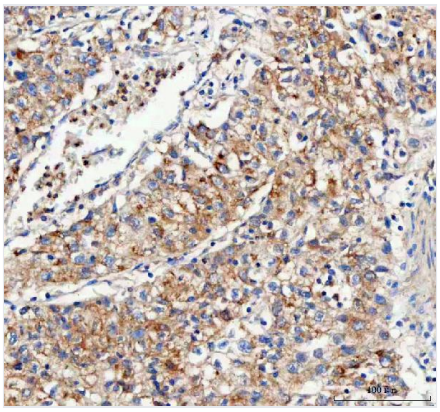
Immunohistochemistry (IHC) of anti-Mitofilin/IMMT antibody

Figure 2. IHC analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Mitofilin/IMMT was detected in a paraffin-embedded section of human esophageal squamous carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Mitofilin/IMMT Antibody (MBS1758458) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



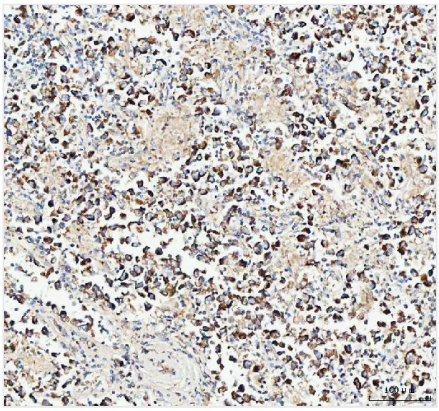
Immunohistochemistry (IHC) of anti-Mitofilin/IMMT antibody

Figure 3. IHC analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Mitofilin/IMMT was detected in a paraffin-embedded section of human rectum adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Mitofilin/IMMT Antibody (MBS1758458) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



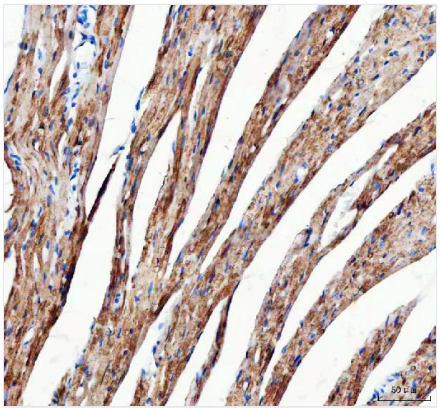
Immunohistochemistry (IHC) of anti-Mitofilin/IMMT antibody

Figure 4. IHC analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Mitofilin/IMMT was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Mitofilin/IMMT Antibody (MBS1758458) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



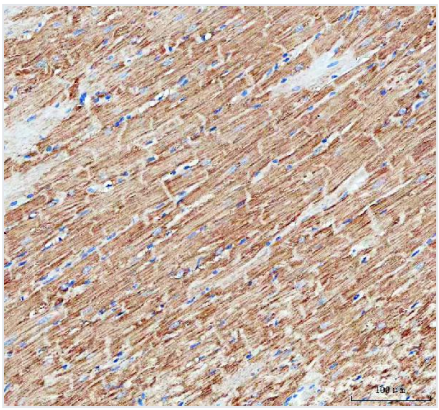
Immunohistochemistry (IHC) of anti-Mitofilin/IMMT antibody

Figure 5. IHC analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Mitofilin/IMMT was detected in a paraffin-embedded section of human testicular germ cell tumors tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Mitofilin/IMMT Antibody (MBS1758458) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.

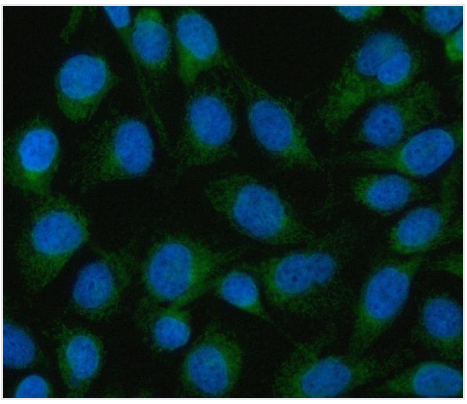


Immunohistochemistry (IHC) of anti-Mitofilin/IMMT antibody

Figure 6. IHC analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Mitofilin/IMMT was detected in a paraffin-embedded section of mouse heart tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Mitofilin/IMMT Antibody (MBS1758458) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



Immunohistochemistry (IHC) of anti-Mitofilin/IMMT antibody
Figure 7. IHC analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Mitofilin/IMMT was detected in a paraffin-embedded section of rat heart tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Mitofilin/IMMT Antibody (MBS1758458) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



Immunofluorescence (IF) of anti-Mitofilin/IMMT antibody
Figure 8. IF analysis of Mitofilin/IMMT using anti-Mitofilin/IMMT antibody (MBS1758458).Mitofilin/IMMT was detected in an immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (#MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-Mitofilin/IMMT Antibody (MBS1758458) overnight at 4 degree C. DyLight488 Conjugated Goat Anti-Rabbit IgG (MBS177405) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Mitofilin/IMMT. It may not necessarily be applicable to this product.

NCBI GI #	29427676
NCBI GeneID	10989
NCBI Accession #	Q16891.1
UniProt Primary Accession #	Q16891
UniProt Secondary Accession #	Q14539; Q15092; Q68D41; Q69HW5; Q6IBL0; Q7Z3X1; Q8TAJ5; Q9P0V2; B1H0U5; B2R5N6
UniProt Related Accession #	Q16891
NCBI Official Full Name	MICOS complex subunit MIC60
NCBI Official Synonym Full Names	inner membrane protein, mitochondrial
NCBI Official Symbol	IMMT
NCBI Official Synonym Symbols	HMP; P87; P89; PIG4; PIG52; MINOS2; P87/89
UniProt Protein Name	MICOS complex subunit MIC60
UniProt Synonym Protein Names	Cell proliferation-inducing gene 4/52 protein; Mitochondrial inner membrane protein; Mitofilin; p87/89
UniProt Gene Name	IMMT
UniProt Synonym Gene Names	HMP; MIC60; MINOS2
UniProt Entry Name	MIC60_HUMAN
NCBI Protein Information	MICOS complex subunit MIC60; mitofilin; motor protein; proliferation-inducing gene 4; mitochondrial inner membrane protein; cell proliferation-inducing protein 52; cell proliferation-inducing gene 4/52 protein; mitochondrial inner membrane organizing syst

UniProt Comments for Mitofilin/IMMT	IMMT: 3 isoforms of the human protein are produced by alternative splicing. Protein type: Mitochondrial; Membrane protein, integral Chromosomal Location of Human Ortholog: 2p11.2|2 Cellular Component: mitochondrion; membrane; mitochondrial inner membrane; integral to membrane Molecular Function: protein binding Biological Process: mitochondrial calcium ion homeostasis; response to cold
Research Articles on Mitofilin/IMMT	**1.** APOOL is a cardiolipin-binding component of the Mitofilin/MINOS protein complex.
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