Datasheet for ABIN3042362

anti-MFN2 antibody (AA 601-757)

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Overview

Quantity:	100 µg
Target:	MFN2
Binding Specificity:	AA 601-757
Reactivity:	Human, Rat, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MFN2 antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Purpose:	Anti-Mitofusin 2/MFN2 Antibody Picoband®
Immunogen:	E.coli-derived human Mitofusin 2 recombinant protein (Position: V601-R757). Human Mitofusin 2 shares 96% and 95% amino acid (aa) sequence identity with mouse and rat Mitofusin 2, respectively.
Isotype:	IgG
Cross-Reactivity (Details):	No cross-reactivity with other proteins
Characteristics:	Anti-Mitofusin 2/MFN2 Antibody Picoband® (ABIN3042362). Tested in WB applications. This antibody reacts with Human, Mouse, Rat. 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 Details

Purification:	Immunogen affinity purified.

Target Details

Target:	MFN2
Alternative Name:	MFN2 (MFN2 Products)
Background:	Synonyms: Mitofusin-2,3.6.5.-,Transmembrane GTPase MFN2,MFN2,CPRP1, KIAA0214, Tissue Specificity: Ubiquitous, expressed at low level. Highly expressed in heart and kidney. . Background: Mitofusin-2 is a protein that in humans is encoded by the MFN2 gene. It is mapped to chromosome 1 and encodes a 757-amino acid protein that contains an ATP/GTP-binding site motif. This gene is expressed in many tissues and cell lines such as brain and KG-1 with the highest expression in heart and skeletal muscle. It has been found that MFN2 triggers mitochondrial energization, at least in part, by regulating OXPHOS expression through signals that are independent of its role as a mitochondrial fusion protein. And it contributes to the maintenance and operation of the mitochondrial network. Axonal CMT type 2A and autosomal dominant HMSN VI are caused by MFN2 and mutations in MFN2, which emphasizes its important role of mitochondrial function for both optic atrophies and peripheral neuropathies. Sequence Similarities: Belongs to the TRAFAC class dynamin-like GTPase superfamily. Dynamin/Fzo/YdjA family. Mitofusin subfamily.
Molecular Weight:	86 kDa
Gene ID:	9927
UniProt:	O95140
Pathways:	Skeletal Muscle Fiber Development

Application Details

Application Notes:	Western blot, 0.1-0.5 µg/mL, Human, Mouse, Rat 1. Neuspiel M, Zunino R, Gangaraju S, Rippstein P, McBride H. Activated mitofusin 2 signals mitochondrial fusion, interferes with Bax activation, and reduces susceptibility to radical induced depolarization. J Biol Chem. 2005 Jul 1, 280(26):25060-70. 2. Santel A, Fuller MT. Control of mitochondrial morphology by a human mitofusin. J Cell Sci. 2001 Mar, 114(Pt 5):867-74 3. Pich, S., Bach, D., Briones, P., Liesa, M., Camps, M., Testar, X., Palacin, M., Zorzano, A. The Charcot-Marie-Tooth type 2A gene product, Mfn2, up-regulates fuel oxidation through expression of OXPHOS system. Hum. Molec. Genet. 14: 1405-1415, 2005. 4. Zuchner S, De Jonghe P, Jordanova A, Claeys KG, Guergueltcheva V, Cherninkova S, Hamilton SR, Van Stavern

Application Details

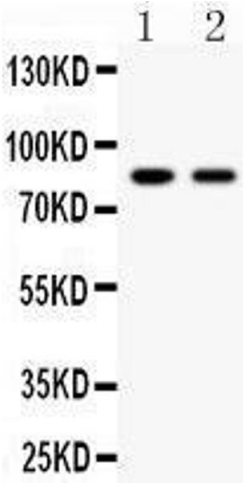
	G, Krajewski KM, Stajich J, Tournev I, Verhoeven K, Langerhorst CT, de Visser M, Baas F, Bird T, Timmerman V, Shy M, Vance JM. Axonal neuropathy with optic atrophy is caused by mutations in mitofusin 2. Ann Neurol. 2006 Feb, 59(2):276.
Comment:	Antibody can be supported by chemiluminescence kit ABIN921124 in WB.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Concentration:	500 µg/mL
Buffer:	Each vial contains 5 mg BSA, 0.9 mg NaCl, 0.2 mg Na2HPO4, 0.05 mg Sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C,-20 °C
Storage Comment:	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.

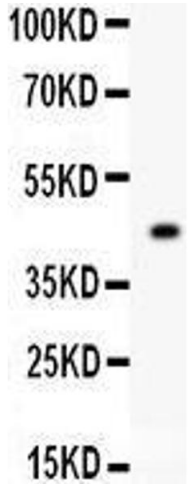
Publications

Product cited in:	Montaigne, Marechal, Coisne, Debry, Modine, Fayad, Potelle, El Arid, Mouton, Sebti, Duez, Preau, Remy-Jouet, Zerimech, Koussa, Richard, Neviere, Edme, Lefebvre, Staels: "Myocardial contractile dysfunction is associated with impaired mitochondrial function and dynamics in type 2 diabetic but not in obese patients." in: **Circulation**, Vol. 130, Issue 7, pp. 554-64, (2014) (PubMed).



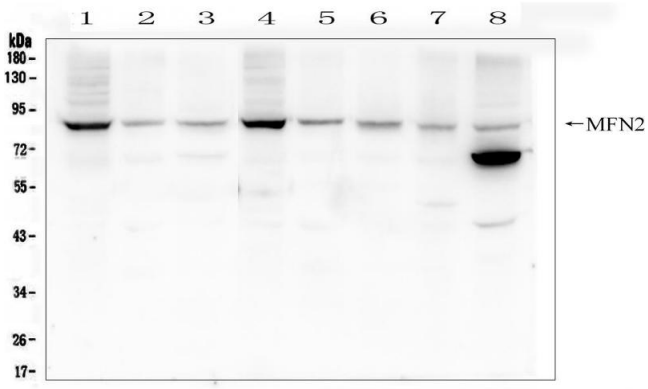
Western Blotting

Image 1. Anti- Mitofusin-2 Picoband antibody, Western blotting All lanes: Anti Mitofusin-2 at 0.5ug/ml Lane 1: HELA Whole Cell Lysate at 40ug Lane 2: A549 Whole Cell Lysate at 40ug Predicted bind size: 86KD Observed bind size: 86KD



Western Blotting

Image 2.



Western Blotting

Image 3. Western blot analysis of Mitofusin 2 using anti-Mitofusin 2 antibody . 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 50ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: rat heart tissue lysates, Lane 3: rat kidney tissue lysates, Lane 4: mouse brain tissue lysates, Lane 5: mouse heart tissue lysates, Lane 6: mouse kidney tissue lysates, Lane 7: mouse small intestine tissue lysates, Lane 8: mouse NIH3T3 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-

Images

Mitofusin 2 antigen affinity purified polyclonal antibody (Catalog #) at 0.5 µg/mL overnight at 4°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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Mitofusin 2 at approximately 86KD. The expected band size for Mitofusin 2 is at 86KD.