

Anti-Mitofusin 2/MFN2 Antibody Picoband™

Catalog Number: PB9265

About MFN2

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.

Overview

Product Name	Anti-Mitofusin 2/MFN2 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Mitofusin 2/MFN2 Antibody Picoband™ catalog # PB9265. Tested in WB applications. This antibody reacts with Human, Mouse, Rat.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	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.
Host	Rabbit
Uniprot ID	O95140

Technical Details

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.
Predicted Reactive Species	Bovine
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat</p>

Anti-Mitofusin 2/MFN2 Antibody Picoband™ (PB9265) Images



Figure 1. Western blot analysis of Mitofusin-2 using anti-Mitofusin-2 antibody (PB9265).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.

Lane 1: Recombinant Human Mitofusin-2 Protein 0.5ng.

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-Mitofusin-2 antigen affinity purified polyclonal antibody (Catalog # PB9265) at 0.5 ug/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 45KD. The expected band size for Mitofusin-2 is at 45KD.



Figure 2. Western blot analysis of Mitofusin-2 using anti-Mitofusin-2 antibody (PB9265).

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: HELA Whole Cell Lysate,

Lane 2: A549 Whole Cell Lysate.

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-Mitofusin-2 antigen affinity purified polyclonal antibody (Catalog # PB9265) at 0.5 ug/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.

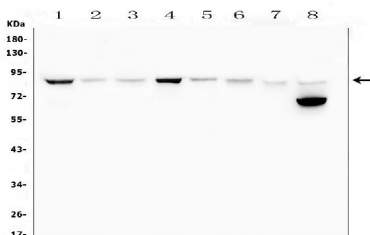


Figure 3. Western blot analysis of Mitofusin 2 using anti-Mitofusin 2 antibody (PB9265).

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-Mitofusin 2 antigen affinity purified polyclonal antibody (Catalog # PB9265) at 0.5 ug/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.

2 Publications Citing This Product

1. PubMed ID: 32884840, Jiao Z,Wu Y,Qu S.Fenpropathrin induces degeneration of dopaminergic neurons via disruption of the mitochondrial quality control system.Cell Death Discov.2020 Aug 25;6:78.doi:10.1038/s41420-020-00313-y.PMID:32884840;PMCID:PMC7447795.
2. PubMed ID: 24928681, Montaigne D, Marechal X, Coisne A, Debry N, Modine T, Fayad G, Potelle C, El Arid Jm, Mouton S, Sebti Y, Duez H, Preau S, Remy-Jouet I, Zerimech F, Koussa M, Richard V, Neviere R, Edme JI, Lefebvre P, Staels B. Circulation. 2014 Aug 12;130(7):554-...

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