abcam

Product datasheet

Anti-Mitofusin 2 antibody [EPR19796] ab205236

敲除验证 重组 RabMAb

8 References 9 图像

概述

产品名称	Anti-Mitofusin 2抗体[EPR19796]
描述	兔单克隆抗体[EPR19796] to Mitofusin 2
宿主	Rabbit
经测试应用	**适用于:** Flow Cyt (Intra), WB, IP, ICC/IF
种属反应性	**与反应:** Human, Recombinant fragment
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: Human Mitofusin 2 recombinant protein fragment; Human fetal heart, fetal kidney and fetal liver lysates; HeLa and HEK-293 whole cell lysates. ICC/IF: HeLa cells. Flow Cyt (intra): HeLa cells. IP: HeLa whole cell lysate.
常规说明	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
存储溶液	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR19796

同种型	IgG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab205236于以下的经测试应用

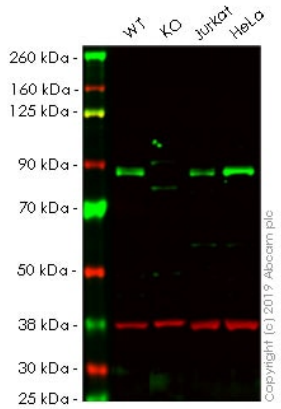
"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
Flow Cyt (Intra)		1/700.
WB		1/2000. Detects a band of approximately 86 kDa (predicted molecular weight: 86 kDa).
IP		1/30.
ICC/IF		1/250.

靶标

功能	Essential transmembrane GTPase, which mediates mitochondrial fusion. Fusion of mitochondria occurs in many cell types and constitutes an important step in mitochondria morphology, which is balanced between fusion and fission. MFN2 acts independently of the cytoskeleton. It therefore plays a central role in mitochondrial metabolism and may be associated with obesity and/or apoptosis processes. Overexpression induces the formation of mitochondrial networks. Plays an important role in the regulation of vascular smooth muscle cell proliferation. Involved in the clearance of damaged mitochondria via selective autophagy (mitophagy). Is required for PARK2 recruitment to dysfunctional mitochondria. Involved in the control of unfolded protein response (UPR) upon ER stress including activation of apoptosis and autophagy during ER stress. Acts as an upstream regulator of EIF2AK3 and suppresses EIF2AK3 activation under basal conditions.
组织特异性	Ubiquitous; expressed at low level. Highly expressed in heart and kidney.
疾病相关	Charcot-Marie-Tooth disease 2A2 Neuropathy, hereditary motor and sensory, 6A
序列相似性	Belongs to the TRAFAC class dynamin-like GTPase superfamily. Dynamin/Fzo/YdjA family. Mitofusin subfamily. Contains 1 dynamin-type G (guanine nucleotide-binding) domain.
翻译后修饰	Phosphorylated by PINK1. Ubiquitinated by non-degradative ubiquitin by PARK2, promoting mitochondrial fusion; deubiquitination by USP30 inhibits mitochondrial fusion.
细胞定位	Mitochondrion outer membrane. Colocalizes with BAX during apoptosis.

图片



Western blot - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

All lanes : Anti-Mitofusin 2 antibody [EPR19796] (ab205236) at 1/2000 dilution

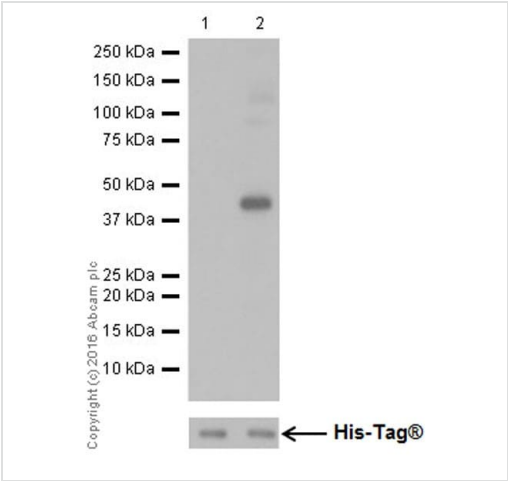
Lane 1 : Wild-type HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 2 : MFN2 knockout HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 3 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate
Lane 4 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 86 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab205236 observed at 86 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab205236 was shown to recognize MFN2 (Mitofusin 2) in wild-type HEK-293 cells as signal was lost at the expected MW in MFN2 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and MFN2 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab205236 and **ab8245** (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/2000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

All lanes : Anti-Mitofusin 2 antibody [EPR19796] (ab205236) at 1/5000 dilution

Lane 1 : Human Mitofusin 1 recombinant protein fragment
Lane 2 : Human Mitofusin 2 recombinant protein fragment

Lysates/proteins at 0.01 µg per lane.

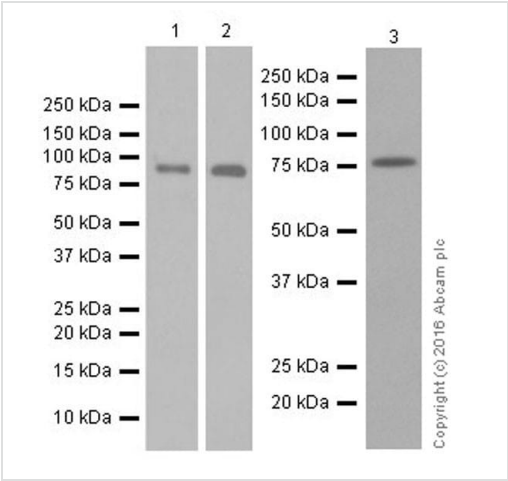
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 86 kDa

Exposure time: 1 second

Blocking/Dilution buffer: 5% NFDM/TBST.

Human Mitofusin 1 recombinant protein fragment contains aa130-485 with a His-Tag®. Human Mitofusin 2 recombinant protein fragment contains aa151-506 with a His-Tag®.



Western blot - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

All lanes : Anti-Mitofusin 2 antibody [EPR19796] (ab205236) at 1/5000 dilution

Lane 1 : Human fetal heart lysate
Lane 2 : Human fetal kidney lysate
Lane 3 : Human fetal liver lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/100000 dilution

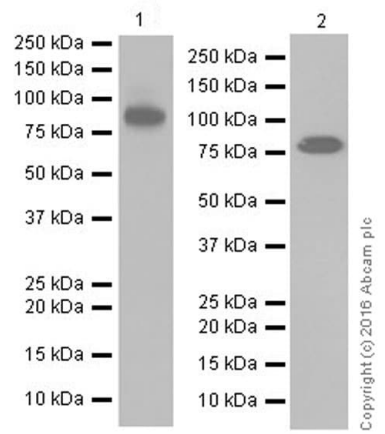
Predicted band size: 86 kDa

Observed band size: 86 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1: 15 seconds; Lane 2 and 3: 30 seconds.

The expression profile is consistent with the literature (PMID 14561718; PMID 25574749).



Western blot - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

All lanes : Anti-Mitofusin 2 antibody [EPR19796] (ab205236) at 1/2000 dilution

Lane 1 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 2 : HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate

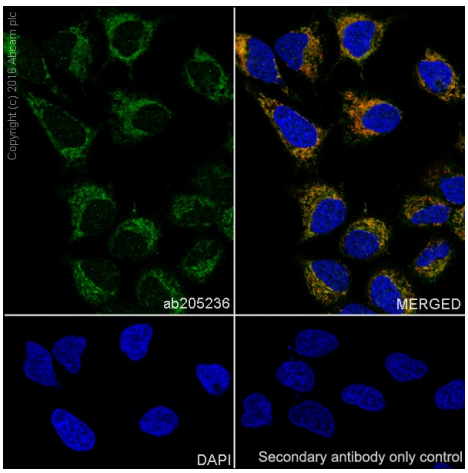
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 86 kDa
Observed band size: 86 kDa

Exposure time: 10 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

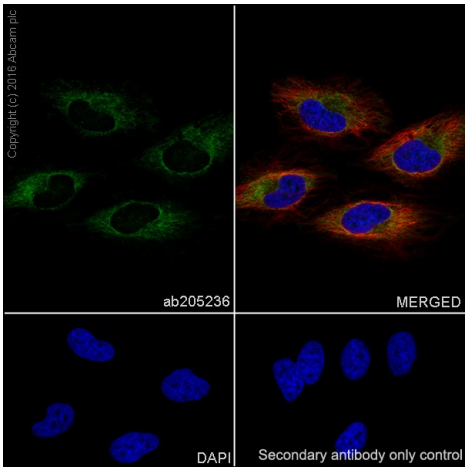


Immunocytochemistry/ Immunofluorescence - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Mitofusin 2 with ab205236 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing mitochondrial staining on HeLa cell line.

The nuclear counter stain is DAPI (blue). COX IV is detected with **ab33985** (Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker), at 1/200 dilution, followed by secondary detection using **ab150120** Alexa Fluor® 594 Goat anti-Mouse (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.

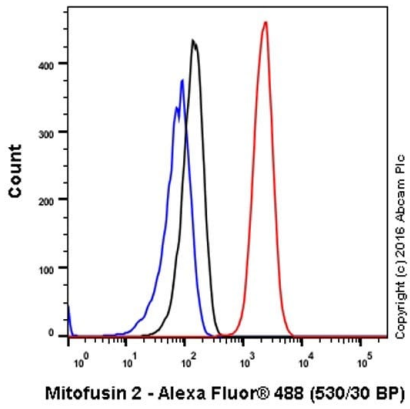


Immunocytochemistry/ Immunofluorescence - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Mitofusin 2 with ab205236 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HeLa cell line.

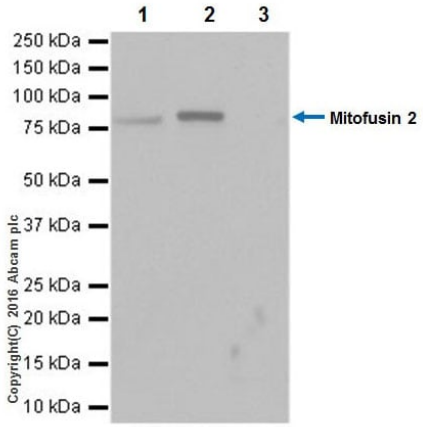
The nuclear counter stain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/200 dilution, followed by secondary detection using **ab150120** Alexa Fluor® 594 Goat anti-Mouse (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Mitofusin 2 with ab205236 at 1/700 dilution (red) compared with a rabbit monoclonal IgG isotype control (**ab172730**; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

Mitofusin 2 was immunoprecipitated from 0.35 mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab205236 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab205236 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: HeLa whole cell lysate, 10 µg (Input).

Lane 2: ab205236 IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab205236 in HeLa whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 seconds.

Anti-Mitofusin 2 antibody [EPR19796] (ab205236)

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