

## Product datasheet

# Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] ab57602

★★★★☆ 14 Abreviews 154 References 7 Images

### Overview

|                            |   |
|----------------------------|---|
| <b>Product name</b>        | Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9]   |
| <b>Description</b>         | Mouse monoclonal [3C9] to Mitofusin 2 + Mitofusin 1   |
| <b>Host species</b>        | Mouse   |
| <b>Specificity</b>         | The immunogen used for this product shares 63% homology with MFN2.<br><br>ab57602 binds to Mitofusin 1 ( <i>Mfn1</i> ) and mitofusin 2 ( <i>Mfn2</i> ) in western blot.   |
| <b>Tested applications</b> | <b>Suitable for:</b> WB, IHC-P, ICC/IF, Flow Cyt, IP  |
| <b>Species reactivity</b>  | <b>Reacts with:</b> Mouse, Rat, Human, Cynomolgus monkey  |
| <b>Immunogen</b>           | Recombinant full length protein corresponding to Human Mitofusin 1 aa 1-741.<br>Database link: <a href="#">Q8IWA4</a>   |
| <b>Positive control</b>    | WB: Mouse cardiomyocytes whole cell lysate; Hela whole cell extract. ICC/IF: HepG2 cells IHC-P: Human normal kidney. Flow cyt: HEK293 cells.  |
| <b>General notes</b>       | This product was changed from ascites to tissue culture supernatant on 05 Feb 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.<br><br>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br><br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

### Properties

|                             |   |
|-----------------------------|---|
| <b>Form</b>                 | Liquid  |
| <b>Storage instructions</b> | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.  |
| <b>Storage buffer</b>       | pH: 7.40<br>Constituents: 8% Sodium chloride, 0.6% Dibasic monohydrogen sodium phosphate, 0.2% Monobasic dihydrogen potassium phosphate, 0.2% Potassium chloride, 91% Water |

|                           |                            |
|---------------------------|----------------------------|
| <b>Purity</b>             | Tissue culture supernatant |
| <b>Purification notes</b> | Purified from TCS          |
| <b>Clonality</b>          | Monoclonal                 |
| <b>Clone number</b>       | 3C9                        |
| <b>Isotype</b>            | IgG2a                      |
| <b>Light chain type</b>   | kappa                      |

## Applications

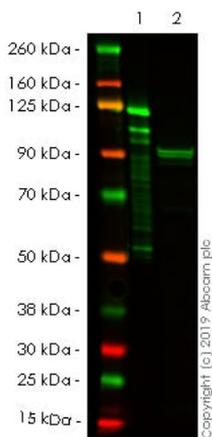
**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab57602 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application     | Abreviews | Notes  |
|-----------------|-----------|--|
| <b>WB</b>       | ★★★★★ (7) | Use at an assay dependent concentration. Predicted molecular weight: 84 kDa.   |
| <b>IHC-P</b>    | ★★★★★ (4) | Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.      |
| <b>ICC/IF</b>   | ★★★★★ (3) | Use at an assay dependent concentration.   |
| <b>Flow Cyt</b> |           | Use at an assay dependent concentration.<br><a href="#">ab170191</a> - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody. |
| <b>IP</b>       |           | Use at an assay dependent concentration.   |

## Target

**Cellular localization** Mitofusin 2: Mitochondrion outer membrane. Colocalizes with BAX during apoptosis. Mitofusin 1: Cytoplasm and Mitochondrion outer membrane.

## Images



Western blot - Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602)

**All lanes** : Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602) at 1/1000 dilution

**Lane 1** : Recombinant Human Mitofusin 1 protein (ab132635)

**Lane 2** : MFN2 OE lysate (DDK tag) 10ng

### Secondary

**All lanes** : Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (ab216772) at 1/10000 dilution

**Predicted band size:** 84 kDa

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour before being incubated with ab57602 overnight at 4°C. Antibody binding was detected using the Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed ab216772 at a 1/10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx.

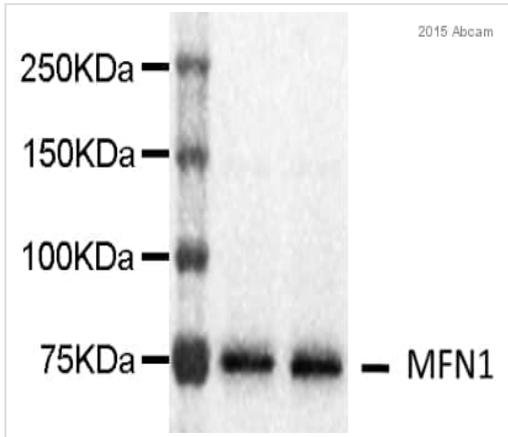
The difference in MW is due to lane one having a GST tag and lane 2 a DDK tag.

Immunocytochemistry/ Immunofluorescence - Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602)

ICC/IF image of ab57602 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab57602, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used

to stain the cell nuclei (blue) at a concentration of 1.43µM.

**This image was generated using a version of the antibody produced in ascites.**



Western blot - Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602)

This image is courtesy of an anonymous Abreview

**All lanes :** Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602) at 1/1000 dilution

**All lanes :** Mouse cardiomyocytes whole cell lysate

Lysates/proteins at 40 µg per lane.

**Secondary**

**All lanes :** HRP-conjugated goat anti-mouse IgG at 1/5000 dilution

Performed under reducing conditions.

**Predicted band size:** 84 kDa

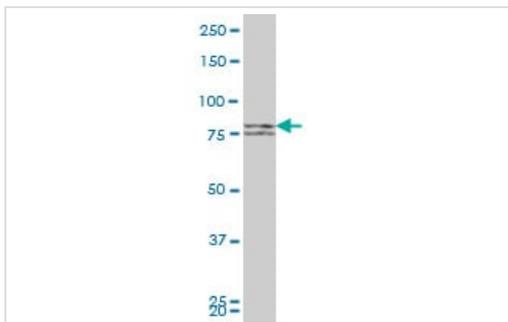
**Observed band size:** 75 kDa

**Exposure time:** 30 seconds

Blocked with 5% milk for 1 hour at 25°C.

Incubated with the primary antibody at 4°C for 13 hours in 1X TBS.

**This image was generated using a version of the antibody produced in ascites.**



Western blot - Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602)

Mitofusin 2 + Mitofusin 1 antibody (ab57602) at 1µg/lane + HeLa cell lysate at 25 µg/lane.

**This image was generated using a version of the antibody produced in ascites.**

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602)

IHC image of ab57602 staining in human normal kidney formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab57602, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

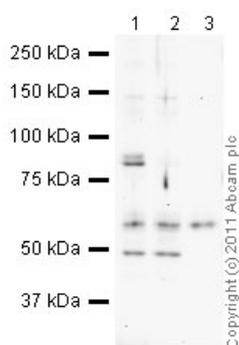
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

**This image was generated using a version of the antibody produced in ascites.**

Flow Cytometry - Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602)

Overlay histogram showing HEK293 cells stained with ab57602 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab57602, 1µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (ab91361, 1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed.

**This image was generated using a version of the antibody produced in ascites.**



Immunoprecipitation - Anti-Mitofusin 2 + Mitofusin 1 antibody [3C9] (ab57602)

Mitofusin 2 + Mitofusin 1 was immunoprecipitated using 0.5mg HeLa whole cell extract, 10µg of Mouse monoclonal to Mitofusin 1 and 50µl of protein G magnetic beads (lane 1). The antibody was incubated with the Protein G beads for 10 min under agitation. No antibody was added to the control lane 2 and no extract or antibody was added to control lane 3. HeLa whole cell extract diluted in RIPA buffer was added to each sample and incubated for 10min under agitation. Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab57602. Secondary: Goat polyclonal to mouse IgG light chain specific (HRP)

at 1/5000 dilution.

Bands: 84kDa:Mitofusin 1; 60kDa bead background: non specific -  
48kDa: We are unsure as to the identity of this extra band.

**This image was generated using a version of the antibody  
produced in ascites.**

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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