Product datasheet

Anti-Mitofusin 2 antibody ab50843

Overview

Product name
Anti-Mitofusin 2 antibody

Description
Rabbit polyclonal to Mitofusin 2

Host species
Rabbit

Tested applications
Suitable for: ICC/IF, WB, IP

Species reactivity
Reacts with: Mouse, Rat, Human

Predicted to work with: Cynomolgus monkey, Orangutan

Immunogen
Synthetic peptide corresponding to Human Mitofusin 2 aa 557-576 conjugated to Keyhole Limpet Haemocyanin (KLH).

Sequence:
C-LGPKNSRRALMGYNDQVQRP

Positive control
Mouse brain mitochondrial extract; rat brain mitochondrial extract; HeLa cell lysate

Properties

Form
Liquid

Storage instructions
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.

Storage buffer
pH: 7.40
Preservative: 0.097% Sodium azide
Constituent: 0.0268% PBS

Purity
Immunogen affinity purified

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab50843 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function

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.

Tissue specificity

Ubiquitous; expressed at low level. Highly expressed in heart and kidney.

Involvement in disease

Charcot-Marie-Tooth disease 2A2
Neuropathy, hereditary motor and sensory, 6A

Sequence similarities

Belongs to the TRAFAC class dynamin-like GTPase superfamily. Dynamin/Fzo/YdjA family.
Mitofusin subfamily.
Contains 1 dynamin-type G (guanine nucleotide-binding) domain.

Post-translational modifications

Phosphorylated by PINK1.
Ubiquitinated by non-degradative ubiquitin by PARK2, promoting mitochondrial fusion; deubiquitination by USP30 inhibits mitochondrial fusion.

Cellular localization

Mitochondrion outer membrane. Colocalizes with BAX during apoptosis.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>1/200.</td>
</tr>
<tr>
<td>WB</td>
<td>★★★★★</td>
<td>Use a concentration of 0.5 - 1 µg/ml. Detects a band of approximately 86 kDa (predicted molecular weight: 84 kDa).</td>
</tr>
<tr>
<td>IP</td>
<td>★★★★★</td>
<td>Use at 5-10 µg/mg of lysate. (using HeLa cell lysate)</td>
</tr>
</tbody>
</table>

Images
**Western blot** - Anti-Mitofusin 2 antibody (ab50843)

**All lanes**: Anti-Mitofusin 2 antibody (ab50843) at 0.25 µg/ml

**Lane 1**: Rat brain mitochondria

**Lane 2**: Mouse brain mitochondria

**Secondary**

**All lanes**: Goat Anti-Rabbit IgG, Peroxidase conjugate and a chemiluminescent substrate.

**Predicted band size**: 84 kDa

**Observed band size**: 86 kDa

**why is the actual band size different from the predicted?**

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**Immunocytochemistry/ Immunofluorescence** - Anti-Mitofusin 2 antibody (ab50843)

ab50843 staining Mitofusin 2 in murine cardiac myocyte cells by Immunocytochemistry/Immunofluorescence.

Cells were fixed in formaldehyde, permeabilized using 1% Triton X-100, blocked with 10% serum for 1 hour at room temperature, then incubated with ab50843 at a 1/200 dilution for 1 hour. The secondary used was an Alexa-Fluor 488 conjugated goat anti-rabbit polyclonal used at a 1/500 dilution.

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

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