Human/Mouse/Rat Mitofusin 2 Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7884G
100 µg

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat Mitofusin 2 in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human Mitofusin 1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Mitofusin 2 Arg364-Phe599 Accession # O95140
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

MFN-2 (Mitofusin 2; also Hypertension-related protein 1, Mitochondrial assembly regulatory factor, HSG protein, and Transmembrane GTPase MFN-2) is an 85-100 kDa mitochondrial member of the dynamin family of molecules. It is ubiquitously expressed, and found in both the ER and outer mitochondrial membrane. Through trans-interactions with MFN-1 and/or MFN-2, MFN-2 apparently mediates the fusion of individual mitochondria with either the ER or with adjacent mitochondria. Pertubations with this process result in both a general failure of mitochondria to fuse, and in cell-specific effects such as a reduction in oxidative phosphorylation, a decrease in the axonal transport of mitochondria, and a deficit in the expression of respiratory chain components. MFN-2 has two key domains. One is a coiled-coil region that mediates MFN-2:MFN-1/2 binding, and a second is a GTPase domain that likely plays a role in fusion. While active, the MFN-2 GTPase domain is 8-fold lower in activity than that for MFN-1. Human MFN-2 is a 757 amino acid (aa) two transmembrane protein that contains a cytoplasmic N- and C-terminus. The cytoplasmic N-terminus (aa 1-604) contains the GTPase domain (aa 99-258) while the cytoplasmic C-terminus possesses a critical coiled-coil motif (aa 696-738). MFN-2 is known to form oligomers, either with itself or MFN-1. Two potential splice variants are reported, one that shows a deletion of aa 245-273, and a second that contains a 33 aa substitution for aa 573-757, suggesting this might be a soluble for of MFN-2. Over aa 364-599, human and mouse MFN-2 share 93% aa sequence identity. Full-length human MFN-2 and MFN-1 share 61% aa sequence identity.

PRODUCT SPECIFIC NOTICES

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