

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Mitofusin 1 in direct ELISAs and Western blots. In direct ELISAs, less than 3% cross-reactivity with recombinant human Mitofusin 2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Mitofusin 1 Ala2-Lys77 Accession # Q8IWA4
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.

Western Blot 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-1 (Mitofusin 1; also Fzo/"fuzzy onions" homolog and Transmembrane GTPase MFN-1) is an 80-90 kDa mitochondrial member of the dynamin family of molecules. It is ubiquitously expressed, and found in the outer mitochondrial membrane. MFN-1 apparently mediates the fusion of individual mitochondria with each other through trans-interactions with adjacent mitochondrial MFN-1 and/or MFN-2. Perturbations with this process result in both a general overall fragmentation of mitochondria, and in cell-specific effects such as a reduction in oxidative phosphorylation or an imbalance in the generation of ROS. MFN-1 has two key domains. One is a coiled-coil region that mediates MFN-1:MFN-1/2 binding, and a second is a GTPase domain whose cleavage of GTP is necessary for membrane fusion. Human MFN-1 is a 741 amino acid (aa) two transmembrane protein that contains a cytoplasmic N- and C-terminus. The cytoplasmic N-terminus (aa 1-584) contains the GTPase domain (aa 82-286) while the cytoplasmic C-terminus possesses a critical coiled-coil motif (aa 679-734). MFN-1 is known to form oligomers, either with itself or MFN-2, and to undergo ubiquitination by MARCH5. Multiple splice variants are reported to occur. One is cytosolic and contains a four aa substitution for aa 367-741. Three others show a deletion of aa 444-554, aa 326-408 and an alternative start site at Met387, respectively. Over aa 1-77, human and mouse MFN-1 share 88% aa sequence identity. Full-length human MFN-1 and MFN-2 share 61% aa sequence identity.

PRODUCT SPECIFIC NOTICES

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