**Mfn2 (F-5): sc-515647**

**BACKGROUND**

Mitofusin 1 (Mfn1) and mitofusin 2 (Mfn2) are homologs for the *Drosophila* protein fuzzy onion (Fzo). They are mitochondrial membrane proteins and are mediators of mitochondrial fusion. A GTPase domain is required for Mfn protein function but the molecular mechanisms of the GTPase-dependent reaction as well as the functional division of the two Mfn proteins are unknown. They are essential for embryonic development and may play a role in the pathology of obesity. Although the Mfn1 and Mfn2 genes are broadly expressed, they show different levels of expression in different tissues. Two Mfn transcripts are elevated in heart, while Mfn2 mRNA is abundantly expressed in heart and muscle tissue but present only at low levels in many other tissues. Mfn1 localizes to mitochondria and participates in at least two different high molecular weight protein complexes in a GTP-dependent manner. Purified recombinant Mfn1 exhibited approximately eightfold higher GTPase activity than Mfn2.

**APPLICATIONS**

Mfn2 (F-5) is recommended for detection of Mfn2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of Mfn2: 86 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: MFN2 (human) mapping to 1p36.22; Mfn2 (mouse) mapping to 4 E2.

**SOURCE**

Mfn2 (F-5) is a mouse monoclonal antibody raised against amino acids 461-528 mapping within a cytoplasmic domain of Mfn2 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG; kappa light chain in 1 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Mfn2 (F-5) is available conjugated to agarose (sc-515647 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515647 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515647 PE), fluorescein (sc-515647 FITC), Alexa Fluor® 488 (sc-515647 AF488), Alexa Fluor® 546 (sc-515647 AF546), Alexa Fluor® 594 (sc-515647 AF594) or Alexa Fluor® 647 (sc-515647 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515647 AF680) or Alexa Fluor® 790 (sc-515647 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.