

MIPEP (J-21): sc-130818

BACKGROUND

MIPEP (mitochondrial intermediate peptidase) is a 713 amino acid protein that performs the final step in processing nuclear-encoded proteins that are targeted to the mitochondrial inner membrane or matrix. MIPEP is primarily involved in the maturation of oxidative phosphorylation-related proteins and is accordingly expressed at highest levels in tissues that have high oxygen consumption, such as skeletal muscle, brain, heart and pancreas. Significantly, human MIPEP is the functional homolog of yeast YMIP, a protein that promotes mitochondrial iron uptake and is regulated by the yeast homolog of Frataxin, which is required for mitochondrial iron efflux. Due to the likely regulatory effect that human Frataxin has on it, MIPEP may be implicated in the clinical manifestations of Friedreich ataxia, an autosomal recessive neurodegenerative disease caused by deficiency of Frataxin.

REFERENCES

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3. Branda, S.S., Yang, Z.Y., Chew, A. and Isaya, G. 1999. Mitochondrial intermediate peptidase and the yeast Frataxin homolog together maintain mitochondrial iron homeostasis in *Saccharomyces cerevisiae*. *Hum. Mol. Genet.* 8: 1099-1110.
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5. Cavadini, P., Gellera, C., Patel, P.I. and Isaya, G. 2000. Human Frataxin maintains mitochondrial iron homeostasis in *Saccharomyces cerevisiae*. *Hum. Mol. Genet.* 9: 2523-2530.
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CHROMOSOMAL LOCATION

Genetic locus: MIPEP (human) mapping to 13q12.12.

SOURCE

MIPEP (J-21) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of MIPEP of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MIPEP (J-21) is recommended for detection of MIPEP of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MIPEP siRNA (h): sc-106225, MIPEP shRNA Plasmid (h): sc-106225-SH and MIPEP shRNA (h) Lentiviral Particles: sc-106225-V.

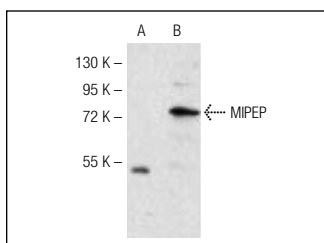
Molecular Weight of MIPEP: 81 kDa.

Positive Controls: human breast carcinoma tissue.

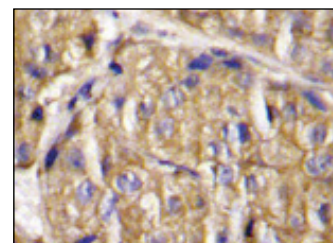
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MIPEP (J-21): sc-130818. Western blot analysis of MIPEP expression in non-transfected (A) and human MIPEP transfected (B) 293 whole cell lysates.



MIPEP (J-21): sc-130818. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic localization.

STORAGE

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