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Rabbit Polyclonal Anti-MOTS-c antibody

Catalog Number: MOTSC-101AP

Lot Number:

General Information

Product	MOTS-c Antibody
Description	Affinity Purified Mitochondrial-Dervied Peptide MOTS-c Antibody
Accession #	Gen Bank: AJM13597.1
Verified Applications	ELISA, IP, WB
Species Cross Reactivity	Human
Host	Rabbit
Immunogen	Full-length peptide corresponding to amino acids 1-16 on MOTS-c.
Alternative Nomenclature	Mitochondrial Derived Peptide MOTS-c MOTS MOTS c

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	.5 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20ºC for long term storage.

Recommended Dilutions

DOT Blot	1:10,000
ELISA	1:10,000
Immunoprecipitation	1:200
Western Blot	1:500

Related Products	Catalog #
BIOTIN-Conjugated	MOTSC-BIOTIN
FITC-Conjugated	MOTSC-FITC
Antigenic Blocking Peptide	P-MOTSC
Western Blot Positive Control	PC-MOTSC

Application Verification:

WB of MOTSC-101AP with HepG2 cells. Image courtesy of anonymous user.

Rat Skeletal Muscle- MOTS-c
Primary Antibody: MOTSC-101AP; 1:50 dilution in IHC Blocking Buffer. DAB (brown) staining and Hematoxylin QS (blue) counterstain. 40X magnification on Leica DM4000. FFPE section.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

Mitochondria are functioning organelles that play a secondary role in signaling within the cell. While the details of mitochondrial signaling are not fully understood, the identification of an open reading frame in the mitochondrial DNA coding for humanin suggests that there are more signaling peptides coded by portions of the mtDNA. A short open reading frame within the 12S subunit of the mitochondrial ribosomal RNA codes for a 16 amino acid peptide called mitochondrial open reading frame of 12S rRNA-c, or MOTS-c. MOTS-c plays a role in insulin sensitivity and metabolic homeostasis (1). MOTS-c targets skeletal muscle tissue, and the mechanism of its action involves inhibition of the folate cycle. MOTS-c promotes the formation of an endogenous AMP analog called 5-aminoimidazole-4-carboxamide ribonucleotide (AICAR). AICAR is an activator of AMPK, suggesting that MOTS-c could be used in an insulin-regulation capacity in order to treat type 2 diabetes (2).

MOTS-c selective antibodies were generated against a peptide taken from the human protein. The MOTS-c-selective antibodies are affinity purified on an immobilized antigen based affinity matrix, the isolated antibodies were then stabilized in antibody stabilization buffer for long-term storage. The MOTS-c-selective antibodies are fully characterized for applications in western blotting and ELISA at the recommended dilutions. FabGennix provides MOTS-c Western blot positive control samples in “ready-to-use” SDS-PAGE sample buffer. Antigenic blocking peptide for MOTS-c antibody is also available, please inquire before ordering. We can conjugate this antibody to fluorophores and other secondary enzymes as an additional service.

References:

1. Lee, C. et al. "The Mitochondrial-derived Peptide MOTS-c Promotes Metabolic Homeostasis and Reduces Obesity and Insulin Resistance." CellMetab. PubMed, 3 Mar. 2015. Web. 30 Aug. 2015.
2. Zarse, K., and M. Ristow. "A Mitochondrially Encoded Hormone Ameliorates Obesity and Insulin Resistance."Cell Metab. PubMed, 3 Mar. 2015. Web. 28 Aug. 2015.

For users who may require large amounts of the products listed above, please inquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.