

M Sirt3 Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP6242b**Specification**

M Sirt3 Antibody (C-term) Blocking peptide - Product Information

Primary Accession [O8R104](#)
Other Accession [NP_071878.2](#)

M Sirt3 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 64384

Other Names

NAD-dependent protein deacetylase sirtuin-3, 351-, Regulatory protein SIR2 homolog 3, SIR2-like protein 3, mSIR2L3, Sirt3, Sir2l3

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

M Sirt3 Antibody (C-term) Blocking peptide - Protein Information

Name Sirt3

Synonyms Sir2l3

Function

NAD-dependent protein deacetylase (PubMed:23835326, PubMed:17923681, PubMed:18794531, PubMed:21172655, PubMed:26620563). Activates or deactivates mitochondrial target proteins by deacetylating key lysine residues (PubMed:23835326, PubMed:17923681, PubMed:18794531, PubMed:21172655). Known targets include ACSS1, IDH, GDH, PDHA1, SOD2, LCAD, SDHA and the ATP synthase subunit ATP5PO (PubMed:16790548, PubMed:18794531).

target="_blank">18794531, PubMed:21172655). Contributes to the regulation of the cellular energy metabolism (PubMed:23835326, PubMed:36804859). Important for regulating tissue-specific ATP levels (PubMed:18794531, PubMed:24252090). In response to metabolic stress, deacetylates transcription factor FOXO3 and recruits FOXO3 and mitochondrial RNA polymerase POLRMT to mtDNA to promote mtDNA transcription (PubMed:23283301). Acts as a regulator of ceramide metabolism by mediating deacetylation of ceramide synthases CERS1, CERS2 and CERS6, thereby increasing their activity and promoting mitochondrial ceramide accumulation (PubMed:26620563). Regulates hepatic lipogenesis. Uses NAD(+) substrate imported by SLC25A47, triggering downstream activation of PRKAA1/AMPK-alpha signaling cascade that ultimately downregulates sterol regulatory element-binding protein (SREBP) transcriptional activities and ATP-consuming lipogenesis to restore cellular energy balance.

Cellular Location

[Isoform L]: Mitochondrion matrix

Tissue Location

Expressed in cardiomyocytes (at protein level) (PubMed:11056054, PubMed:35959657). Expressed in the brain, liver, kidney and testes (PubMed:11056054). Expressed in skeletal muscles (at protein level) (PubMed:23283301, PubMed:23835326)

M Sirt3 Antibody (C-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

M Sirt3 Antibody (C-term) Blocking peptide - Images

M Sirt3 Antibody (C-term) Blocking peptide - Background

SIRT3 is a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known to regulate epigenetic gene silencing and suppress recombination of rDNA. Studies suggest that the human sirtuins may function as intracellular regulatory proteins with mono-ADP-ribosyltransferase activity. The SIRT3 is included in class I of the sirtuin family.

M Sirt3 Antibody (C-term) Blocking peptide - References

Hirschey, M.D., et al. Nature 464(7285):121-125(2010) Pillai, V.B., et al. J. Biol. Chem. 285(5):3133-3144(2010) Kim, H.S., et al. Cancer Cell 17(1):41-52(2010)