

SIRT3 Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14573a**Specification**

SIRT3 Antibody (N-term) - Product Information

Application	WB,E
Primary Accession	Q9NTG7
Other Accession	NP_036371.1 , NP_001017524.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	43573
Antigen Region	56-84

SIRT3 Antibody (N-term) - Additional Information**Gene ID** 23410**Other Names**

NAD-dependent protein deacetylase sirtuin-3, mitochondrial, hSIRT3, 351-, Regulatory protein SIR2 homolog 3, SIR2-like protein 3, SIRT3, SIR2L3

Target/Specificity

This SIRT3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 56-84 amino acids from the N-terminal region of human SIRT3.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

SIRT3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SIRT3 Antibody (N-term) - Protein Information**Name** SIRT3**Synonyms** SIR2L3

Function NAD-dependent protein deacetylase (PubMed:[12186850](#), PubMed:[12374852](#), PubMed:[16788062](#), PubMed:[18680753](#), PubMed:[18794531](#), PubMed:[23283301](#), PubMed:[24121500](#), PubMed:[24252090](#), PubMed:[19535340](#)). Activates or deactivates mitochondrial target proteins by deacetylating key lysine residues (PubMed:[12186850](#), PubMed:[12374852](#), PubMed:[16788062](#), PubMed:[18680753](#), PubMed:[18794531](#), PubMed:[23283301](#), PubMed:[24121500](#), PubMed:[24252090](#)). Known targets include ACSS1, IDH, GDH, SOD2, PDHA1, LCAD, SDHA and the ATP synthase subunit ATP5PO (PubMed:[16788062](#), PubMed:[18680753](#), PubMed:[24121500](#), PubMed:[24252090](#), PubMed:[19535340](#)). Contributes to the regulation of the cellular energy metabolism (PubMed:[24252090](#)). Important for regulating tissue-specific ATP levels (PubMed:[18794531](#)). 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 (By similarity). 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

Mitochondrion matrix

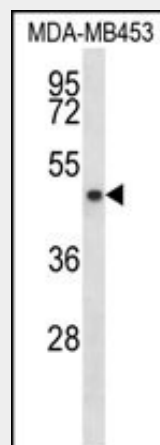
Tissue Location

Widely expressed.

SIRT3 Antibody (N-term) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SIRT3 Antibody (N-term) - Images

SIRT3 Antibody (N-term) (Cat. #AP14573a) western blot analysis in MDA-MB453 cell line lysates (35ug/lane). This demonstrates the SIRT3 antibody detected the SIRT3 protein (arrow).

SIRT3 Antibody (N-term) - Background

This gene encodes 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 protein encoded by this gene is included in class I of the sirtuin family. Two alternatively spliced transcript variants that encode different proteins have been described for this gene.

SIRT3 Antibody (N-term) - References

Dransfeld, C.L., et al. Int. J. Oncol. 36(4):955-960(2010)
Shulga, N., et al. J. Cell. Sci. 123 (PT 6), 894-902 (2010) :
Shi, T., et al. J Dig Dis 11(1):55-62(2010)
Kong, X., et al. PLoS ONE 5 (7), E11707 (2010) :
Li, S., et al. PLoS ONE 5 (5), E10486 (2010) :