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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

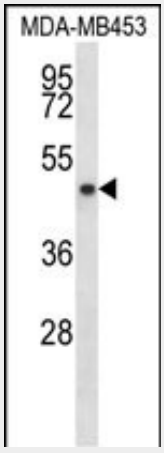
Tissue Location
Widely expressed.

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 Cytomety
- Cell Culture

SIRT3 Antibody (N-term) - Images



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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) :