

SIRT3 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10176**Specification**

SIRT3 Antibody - Product Information

Application	WB
Primary Accession	Q9NTG7
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	43573

SIRT3 Antibody - Additional Information**Gene ID** 23410

Positive Control	Jurkat cell lysate
Application & Usage	Western Blot analysis (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. Blocking peptide is available separately.

Other Names

NAD-dependent deacetylase sirtuin-3, mitochondrial, SIR2-like protein 3

Target/Specificity

Sirtuin-3

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit anti- SIRT3 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 5 mM EDTA and 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

SIRT3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SIRT3 Antibody - 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 - 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 - Images

SIRT3 Antibody - Background

Silent information regulator (Sir2)-like family deacetylases (also known as sirtuins) are highly conserved proteins and have important roles in the regulation of metabolism, inflammation, cellular survival growth and differentiation. SIRT3 is a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Yeast sirtuin proteins are found to regulate epigenetic gene silencing. Sirtuins are NAD-dependent protein ADP-ribosyl transferase which catalyzes the transfer of ADP-ribosyl groups onto target proteins.