

**SIRT3 Rabbit mAb**  
Catalog # AP76086**Specification****SIRT3 Rabbit mAb - Product Information**

Application	<b>WB, IHC</b>
Primary Accession	<a href="#">O9NTG7</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Monoclonal Antibody</b>
Calculated MW	<b>43573</b>

**SIRT3 Rabbit mAb - Additional Information****Gene ID** 23410**Other Names**  
SIRT3**Dilution**  
WB~~1/500-1/1000  
IHC~~1/50-1/100**Format**  
Liquid**SIRT3 Rabbit mAb - Protein Information****Name** SIRT3 {ECO:0000303|PubMed:12186850, ECO:0000312|HGNC:HGNC:14931}**Function**

NAD-dependent protein deacetylase (PubMed:<a href="http://www.uniprot.org/citations/12186850" target="\_blank">12186850</a>, PubMed:<a href="http://www.uniprot.org/citations/12374852" target="\_blank">12374852</a>, PubMed:<a href="http://www.uniprot.org/citations/16788062" target="\_blank">16788062</a>, PubMed:<a href="http://www.uniprot.org/citations/18680753" target="\_blank">18680753</a>, PubMed:<a href="http://www.uniprot.org/citations/18794531" target="\_blank">18794531</a>, PubMed:<a href="http://www.uniprot.org/citations/19535340" target="\_blank">19535340</a>, PubMed:<a href="http://www.uniprot.org/citations/23283301" target="\_blank">23283301</a>, PubMed:<a href="http://www.uniprot.org/citations/24121500" target="\_blank">24121500</a>, PubMed:<a href="http://www.uniprot.org/citations/24252090" target="\_blank">24252090</a>). Activates or deactivates mitochondrial target proteins by deacetylating key lysine residues (PubMed:<a href="http://www.uniprot.org/citations/12186850" target="\_blank">12186850</a>, PubMed:<a href="http://www.uniprot.org/citations/12374852" target="\_blank">12374852</a>, PubMed:<a href="http://www.uniprot.org/citations/16788062" target="\_blank">16788062</a>, PubMed:<a href="http://www.uniprot.org/citations/18680753" target="\_blank">18680753</a>, PubMed:<a href="http://www.uniprot.org/citations/18794531" target="\_blank">18794531</a>, PubMed:<a href="http://www.uniprot.org/citations/23283301" target="\_blank">23283301</a>, PubMed:<a href="http://www.uniprot.org/citations/24121500" target="\_blank">24121500</a>, PubMed:<a href="http://www.uniprot.org/citations/24252090" target="\_blank">24252090</a>).

<http://www.uniprot.org/citations/24121500> target="\_blank">24121500</a>, PubMed:<a href="http://www.uniprot.org/citations/24252090" target="\_blank">24252090</a>, PubMed:<a href="http://www.uniprot.org/citations/38146092" target="\_blank">38146092</a>). Known targets include ACSS1, IDH, GDH, SOD2, PDHA1, LCAD, SDHA, MRPL12 and the ATP synthase subunit ATP5PO (PubMed:<a href="http://www.uniprot.org/citations/16788062" target="\_blank">16788062</a>, PubMed:<a href="http://www.uniprot.org/citations/18680753" target="\_blank">18680753</a>, PubMed:<a href="http://www.uniprot.org/citations/19535340" target="\_blank">19535340</a>, PubMed:<a href="http://www.uniprot.org/citations/24121500" target="\_blank">24121500</a>, PubMed:<a href="http://www.uniprot.org/citations/24252090" target="\_blank">24252090</a>, PubMed:<a href="http://www.uniprot.org/citations/38146092" target="\_blank">38146092</a>). Contributes to the regulation of the cellular energy metabolism (PubMed:<a href="http://www.uniprot.org/citations/24252090" target="\_blank">24252090</a>). Important for regulating tissue-specific ATP levels (PubMed:<a href="http://www.uniprot.org/citations/18794531" target="\_blank">18794531</a>). In response to metabolic stress, deacetylates transcription factor FOXO3 and recruits FOXO3 and mitochondrial RNA polymerase POLRMT to mtDNA to promote mtDNA transcription (PubMed:<a href="http://www.uniprot.org/citations/23283301" target="\_blank">23283301</a>). 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 (By similarity). 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 (By similarity). In addition to protein deacetylase activity, also acts as a protein-lysine deacetylase by mediating deacetylation of proteins, such as CCNE2 and 'Lys-16' of histone H4 (H4K16la) (PubMed:<a href="http://www.uniprot.org/citations/36896611" target="\_blank">36896611</a>, PubMed:<a href="http://www.uniprot.org/citations/37720100" target="\_blank">37720100</a>).

#### Cellular Location

Mitochondrion matrix

#### Tissue Location

Widely expressed.

### SIRT3 Rabbit mAb - 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 Rabbit mAb - Images



