

Peptide-affinity purified goat antibody
Catalog # AF2462a

SIRT3 Antibody (C-Term) - Product Information

Application	WB, E
Primary Accession	Q9NTGZ
Other Accession	NP_036371.1 , NP_001017524.1 , 23410
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	43573

SIRT3 Antibody (C-Term) - Additional Information

Gene ID 23410

Other Names

NAD-dependent protein deacetylase sirtuin-3, mitochondrial, hSIRT3, 3.5.1.-, Regulatory protein SIR2 homolog 3, SIR2-like protein 3, SIRT3, SIR2L3

Dilution

WB ~ ~ 1:1000

$$E \sim \sim N/A$$

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

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

SIRT3 Antibody (C-Term) - Protein Information

Name SIRT3 {ECO:0000303|PubMed:12186850, ECO:0000312|HGNC:HGNC:14931}

Function

NAD-dependent protein deacetylase (PubMed:12186850, PubMed:12374852, PubMed:12374852, PubMed:12374852)

<http://www.uniprot.org/citations/16788062> target="_blank">16788062, PubMed:18680753, PubMed:18794531, PubMed:19535340, PubMed:23283301, PubMed:24121500, PubMed:24252090). 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, PubMed:38146092). Known targets include ACSS1, IDH, GDH, SOD2, PDHA1, LCAD, SDHA, MRPL12 and the ATP synthase subunit ATP5PO (PubMed:16788062, PubMed:18680753, PubMed:19535340, PubMed:24121500, PubMed:24252090, PubMed:38146092). 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 (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 deacylase by mediating delactylation of proteins, such as CCNE2 and 'Lys-16' of histone H4 (H4K16la) (PubMed:36896611, PubMed:37720100).

Cellular Location

Mitochondrion matrix

Tissue Location

Widely expressed.

SIRT3 Antibody (C-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 (C-Term) - Images



AF2462a (0.2 µg/ml) staining of Human Liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

SIRT3 Antibody (C-Term) - Background

This antibody is expected to recognize both reported isoforms (NP_036371.1 and NP_001017524.1).

SIRT3 Antibody (C-Term) - References

SIRT3, a mitochondrial Sirtuin deacetylase, regulates mitochondrial function and thermogenesis in Brown adipocytes. Shi T, Wang F, Stieren E, Tong Q. J Biol Chem. 2005 Jan 14; [Epub ahead of print] PMID: 15653680