

Sirtuin 3 (mouse) Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF3563a**Specification**

Sirtuin 3 (mouse) Antibody (internal region) - Product Information

Application	WB, E
Primary Accession	Q9NTG7
Other Accession	NP_071878.2 , NP_001171275.1 , 23410 , 64384 (mouse), 293615 (rat)
Reactivity	Mouse
Predicted	Human, Rat, Pig
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	43573

Sirtuin 3 (mouse) Antibody (internal region) - 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~~N/A

Format

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

StorageMaintain 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**Sirtuin 3 (mouse) Antibody (internal region) is for research use only and not for use in diagnostic
or therapeutic procedures.**Sirtuin 3 (mouse) Antibody (internal region) - Protein Information****Name** SIRT3 {ECO:0000303|PubMed:12186850, ECO:0000312|HGNC:HGNC:14931}**Function**

NAD-dependent protein deacetylase (PubMed:12186850, PubMed:12374852, PubMed: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 deacylation of proteins, such as CCNE2 and 'Lys-16' of histone H4 (H4K16la) (PubMed:36896611, PubMed:37720100).

Cellular Location

Mitochondrion matrix

Tissue Location

Widely expressed.

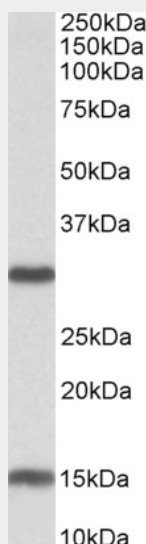
Sirtuin 3 (mouse) Antibody (internal region) - Protocols

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](#)

Sirtuin 3 (mouse) Antibody (internal region) - Images



AF3563a (0.3 µg/ml) staining of Mouse Heart lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Sirtuin 3 (mouse) Antibody (internal region) - Background

This antibody is expected to recognize both reported isoforms (NP_071878.2; NP_001171275.1). Reported variants represent identical proteins: NP_071878.2; NP_001120823.1

Sirtuin 3 (mouse) Antibody (internal region) - References

Sirtuin 3, a new target of PGC-1alpha, plays an important role in the suppression of ROS and mitochondrial biogenesis. Kong X, Wang R, Xue Y, Liu X, Zhang H, Chen Y, Fang F, Chang Y. PLoS One. 2010 Jul 22;5(7):e11707. PMID: 20661474