10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Sirtuin 3 (mouse) Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF3563a

Specification

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

Application	**WB**
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

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
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:<a

href="http://www.uniprot.org/citations/18794531" target="_blank">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). Known targets include ACSS1, IDH, GDH, SOD2, PDHA1, LCAD, SDHA and the ATP synthase subunit ATP5PO (PubMed:16788062, PubMed:18680753, PubMed:19535340, PubMed:24121500, PubMed:24252090). 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.

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

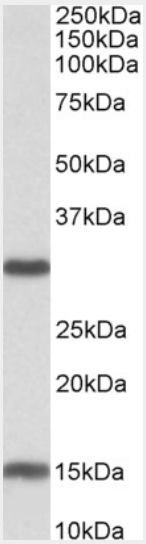
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

- 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