

<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). 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. 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

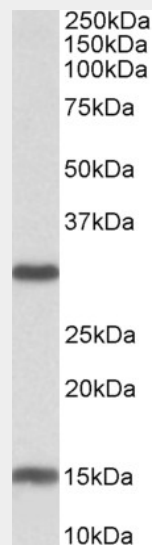
Widely expressed.

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