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Anti-SIRT3 Antibody

Catalog # AP96053

Product Information

Application	WB, FC
Primary Accession	Q9NTG7
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	43573

Additional Information

Gene ID	23410
Other Names	SIR2L3; NAD-dependent protein deacetylase sirtuin-3, mitochondrial; hSIRT3; Regulatory protein SIR2 homolog 3; SIR2-like protein 3
Target/Specificity	Recombinant fusion protein of human SIRT3 expressed in E. Coli
Dilution	WB~~WB (1/500 - 1/1000) FC~~FC (1/100 - 1/200)
Format	Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

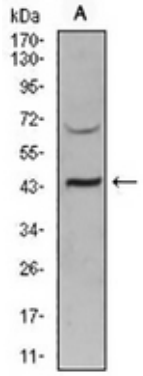
Name	SIRT3 {ECO:0000303|PubMed:12186850, ECO:0000312|HGNC:HGNC:14931}
Function	NAD-dependent protein deacetylase (PubMed: 12186850, PubMed:12374852, PubMed:16788062, PubMed:18680753, PubMed:18794531, PubMed:19535340, PubMed:23283301, PubMed:24121500, PubMed:24252090). Activates or deactivates mitochondrial 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 down-regulates 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 recognizing other acyl groups, such as benzoyl and lactoyl, leading to protein debenzoylation and delactylation, respectively (PubMed:39524354, PubMed:36896611, PubMed:37720100). Catalyzes debenzoylation of PPIF and ACLY (PubMed:37720100). Mediates delactylation of CCNE2 and 'Lys-16' of histone H4 (H4K16la) (PubMed:36896611, PubMed:37720100).

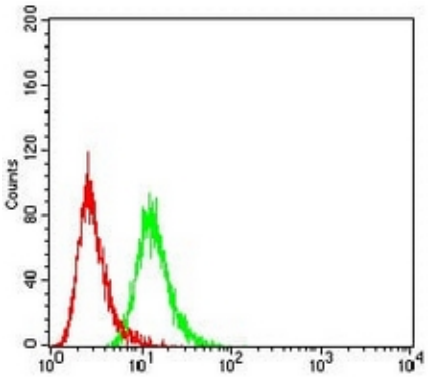
Cellular Location Mitochondrion matrix

Tissue Location Widely expressed.

Images



Western blot analysis of SIRT3 expression in PANC1 (A) whole cell lysates. (Predicted band size: 44 kD; Observed band size: 44 kD)



Flow cytometric analysis of HeLa cells using Anti-SIRT3 Antibody (green) and negative control (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.