

Anti-SIRT3 Antibody

Rabbit polyclonal antibody to SIRT3

Catalog # AP60511

Product Information

Application	WB
Primary Accession	Q9NTG7
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
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	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human SIRT3. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) 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 ACS1, 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](#)).

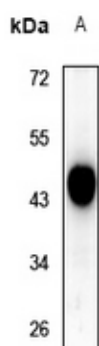
Cellular Location Mitochondrion matrix

Tissue Location Widely expressed.

Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human SIRT3. The exact sequence is proprietary.

Images



Western blot analysis of SIRT3 expression in HCT116 (A) whole cell lysates.

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