




Rabbit Anti-SIRT1 antibody

SL0921R

Product Name:	SIRT1
Chinese Name:	沉默调节蛋白1抗体
Alias:	75SirT1; BA57G10.4; hSIR2; hSIRT1; NAD dependent deacetylase SIRT1; NAD dependent deacetylase sirtuin 1; NAD dependent deacetylase sirtuin 2; Silent mating type information regulation 2; OTTHUMP00000198111; OTTHUMP00000198112; SIR2 like 1; SIR2 like protein 1; SIR2-like protein 1; Regulatory protein SIR2 homolog 1; SIR1_HUMAN; SIR2ALPHA; SIR2alpha protein; SIR2L1; SIR2L2; SIRT 1; SIRT-1; Sirt1; SIRT1 Sir2 like proteins (siruitins) type 1; SIRT1: sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae); sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae); SirtT1 75 kDa fragment; sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae);Sirtuin 1; sirtuin; Sirtuin type 1; Sirtuin type 2.
文献引用 	<p>Specific References(3) SL0921R has been referenced in 3 publications.</p> <p>[IF=5.36]Mohan, Mahesh, et al. "Dysregulated miR34a SIRT1 Acetyl p65 Axis Is a Potential Mediator of Immune Activation in the Colon during Chronic Simian Immunodeficiency Virus Infection of Rhesus Macaques." The Journal of Immunology (2014): 1401447. PubMed:25452565</p> <p>[IF=3.10]Yan, Dongying, et al. "Effects of Aluminium on long-term Memory in Rats and on SIRT1 Mediating the Transcription of CREB-Dependent Gene in Hippocampus." Basic & Clinical Pharmacology & Toxicology (2017).WB;Rat. PubMed:28429887</p> <p>[IF=3.74]Hu, Zheng, et al. "5-Aminolevulinic acid-mediated sonodynamic therapy induces anti-tumor effects in malignant melanoma via p53-miR-34a-Sirt1 axis." Journal of dermatological science 79.2 (2015): 155-162.WB;Mouse.</p>

	PubMed:25982144
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human, Mouse, Rat, Chicken, Cow, Horse, Rabbit,
Applications:	WB=1:500-2000 ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 Flow-Cyt=1 µg/Test IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	58/81kDa
Cellular localization:	The nucleus/cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human SirtT1:101-200/747
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	<p>This gene encodes a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known to regulate epigenetic gene silencing and suppress recombination of rDNA. Studies suggest that the human sirtuins may function as intracellular regulatory proteins with mono-ADP-ribosyltransferase activity. The protein encoded by this gene is included in class I of the sirtuin family. Alternative splicing results in multiple transcript variants.</p> <p>Function: NAD-dependent protein deacetylase, which regulates processes such as apoptosis and muscle differentiation by deacetylating key proteins. Deacetylates 'Lys-382' of p53/TP53 and impairs its ability to induce proapoptotic program and modulate cell senescence. Deacetylates TAF1B and thereby represses rDNA transcription by the RNA polymerase I. Deacetylates 'Lys-266' of SUV39H1, leading to its activation. Deacetylates 'Lys-26' of HIST1H1E. Involved in HES1- and HEY2-mediated transcriptional repression. Inhibits skeletal muscle differentiation by deacetylating PCAF and MYOD1. May serve as a sensor of the cytosolic ratio of NAD(+)/NADH, which is essential in skeletal muscle cell differentiation. Deacetylates 'Lys-16' of histone H4 (in vitro). Component of the eNoSC (energy-dependent nucleolar silencing) complex, a complex that mediates silencing of rDNA in response to intracellular energy status and acts by recruiting histone-modifying enzymes. The eNoSC complex is able to sense the energy status of cell: upon glucose starvation, elevation of NAD(+)/NADP(+) ratio activates SIRT1, leading to histone H3 deacetylation followed by dimethylation of H3 at 'Lys-9' (H3K9me2) by SUV39H1 and</p>

the formation of silent chromatin in the rDNA locus. Deacetylates H2A. In case of HIV-1 infection, interacts with and deacetylates the viral Tat protein. Deacetylates APEX1 at 'Lys-6' and 'Lys-7'. Stimulates cellular AP endonuclease activity by promoting the association of APEX1 to XRCC1.

Subunit:

Found in a complex with PCAF and MYOD1. Component of the eNoSC complex, composed of SIRT1, SUV39H1 and RRP8. Interacts with HES1, HEY2 and PML. Interacts with RPS19BP1/AROS. Interacts with KIAA1967/DBC1 (via N-terminus); the interaction disrupts the interaction between SIRT1 and p53/TP53. Interacts with SETD7; the interaction induces the dissociation of SIRT1 from p53/TP53 and increases p53/TP53 activity. Interacts with MYCN, NR1I2, CREBZF, TSC2, TLE1, FOS, JUN, NR0B2, PPARG, NCOR, IRS1, IRS2 and NMNAT1. Interacts with HNF1A; the interaction occurs under nutrient restriction. Interacts with SUZ12; the interaction mediates the association with the PRC4 histone methylation complex which is specific as an association with PCR2 and PCR3 complex variants is not found. Interacts with HIV-1 tat.

Subcellular Location:

Nucleus, PML body. Cytoplasm. Note=Recruited to the nuclear bodies via its interaction with PML. Colocalized with APEX1 in the nucleus. May be found in nucleolus, nuclear euchromatin, heterochromatin and inner membrane. Shuttles between nucleus and cytoplasm.

SirtT1 75 kDa fragment: Cytoplasm. Mitochondrion.

Tissue Specificity:

Widely expressed.

Post-translational modifications:

Methylated on multiple lysine residues; methylation is enhanced after DNA damage and is dispensable for deacetylase activity toward p53/TP53.

Phosphorylated. Phosphorylated by STK4/MST1, resulting in inhibition of SIRT1-mediated p53/TP53 deacetylation. Phosphorylation by MAPK8/JNK1 at Ser-27, Ser-47, and Thr-530 leads to increased nuclear localization and enzymatic activity.

Phosphorylation at Thr-530 by DYRK1A and DYRK3 activates deacetylase activity and promotes cell survival. Phosphorylation by mammalian target of rapamycin complex 1 (mTORC1) at Ser-47 inhibits deacetylation activity. Phosphorylated by CaMK2, leading to increased p53/TP53 and NF-kappa-B p65/RELA deacetylation activity (By similarity). Phosphorylation at Ser-27 implicating MAPK9 is linked to protein stability. There is some ambiguity for some phosphosites: Ser-159/Ser-162 and Thr-544/Ser-545. Proteolytically cleaved by cathepsin B upon TNF-alpha treatment to yield catalytic inactive but stable SirtT1 75 kDa fragment (75SirT1).

S-nitrosylated by GAPDH, leading to inhibit the NAD-dependent protein deacetylase activity.

Similarity:

Belongs to the sirtuin family.
Contains 1 deacetylase sirtuin-type domain.

SWISS:
Q96EB6

Gene ID:
23411

Database links:

[Entrez Gene: 23411](#)Human

[Entrez Gene: 93759](#)Mouse

[Entrez Gene: 309757](#)Rat

[Omim: 604479](#)Human

[SwissProt: Q96EB6](#)Human

[SwissProt: Q923E4](#)Mouse

[Unigene: 369779](#)Human

[Unigene: 351459](#)Mouse

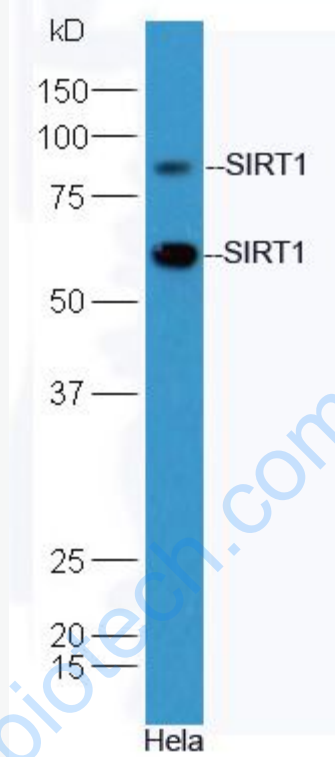
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

在Sirtuin蛋白家族中, sirtuin 1(沉默信息调节子)参与多种The new supersedes the old活动, 包括DNA的自我保护和修复, 抑制脂质过氧化积累, 抑制其他Apoptosis相关基因的表达以及和细胞寿命相关的活动。限制摄入的热量可以加强SIRT1的表达, 从而延长了寿命。

SIRT蛋白成为多种生物过程的调节者也参与衰老的调控。在研究最多的SIRT蛋白中, SIRT1与各种非组蛋白或者转录因子相互作用, 包括p53、FOXO蛋白、p300、NFkB和MyoD, sirtuins可参与凋亡、细胞存活、转录和代谢等过程。以sirtuins为靶标的药物可能在治疗衰老、癌症、Diabetes和神经退行性变中 useful。

Picture:



Sample: HeLa Cell Lysate at 30 ug

Primary: Anti-SIRT1 (SL0921R) at 1:500 dilution;

Secondary: HRP conjugated Goat-Anti-rabbit IgG(SL0921R) at 1: 5000 dilution;

Predicted band size: 58/81 kD

Observed band size: 58/81 kD

