



SIRT1 Rabbit mAb

Catalog No	YP-rAb-18098
Isotype	IgG
Reactivity	Human,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	SIRT1
Protein Name	NAD-dependent protein deacetylase sirtuin-1
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:100-200; WB 1:1000-5000; IF 1:200-1000; ELISA 1:5000-20000; IP 1:50-200 Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	SIRT1 ; SIR2L1 ; NAD-dependent protein deacetylase sirtuin-1 ; hSIRT1 ; Regulatory protein SIR2 homolog 1 ; SIR2-like protein 1 ; hSIR2
Observed Band	130kD
Calculated Molecular Weight	81kD
Cell Pathway	Nuclear
Tissue Specificity	Widely expressed.
Function	Catalytic activity:NAD(+) + an acetylprotein = nicotinamide + O-acetyl-ADP-ribose + a protein.,cofactor:binds 1 zinc ion per subunit.,enzyme regulation:Inhibited by nicotinamide. Activated by resveratrol (3,5,4'-trihydroxy-trans-stilbene), butein (3,4,2',4'-tetrahydroxychalcone), piceatannol (3,5,3',4'-tetrahydroxy-trans-stilbene), Isoliquiritigenin (4,2',4'-trihydroxychalcone), fisetin (3,7,3',4'-tetrahydroxyflavone) and quercetin (3,5,7,3',4'-pentahydroxyflavone). RPS19BP1/AROS acts as a positive regulator of deacetylation activity.,Function:NAD-dependent 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. 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. Despite some ability to deacetylate histones in vitro, such activity is either weak or inexistent in vivo. In case of HIV-1 infection, interacts with and deacetylates the viral Tat protein.,miscellaneous:Red wine, which contains resveratrol, may participate in activation of sirtuin proteins, and may therefore participate in an extended lifespan as it has been observed in yeast.,similarity:Belongs to the sirtuin family.,similarity:Contains 1 deacetylase sirtuin-type domain.,subcellular location:Recruited to the nuclear bodies via its interaction with PML.,subunit:Interacts with TAF1B. Found in a complex with PCAF and MYOD1 (By similarity). Interacts with MLLT7/FOXO4, HES1, HEY2, p53/TP53 and PML. Interacts with RPS19BP1/AROS.,tissue specificity:Widely expressed.,

Background

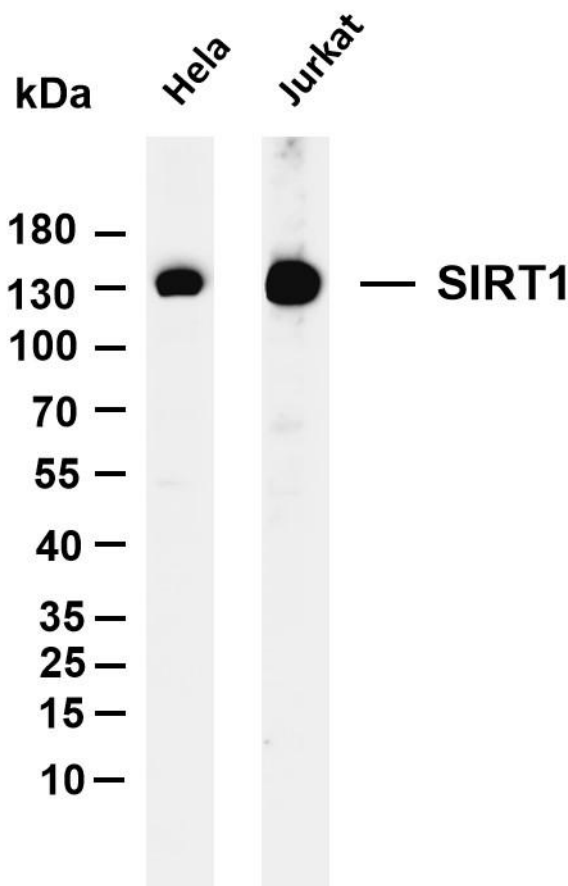
This gene encodes a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known 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. [provided by RefSeq, Dec 2008],

matters needing attention

Avoid repeated freezing and thawing!

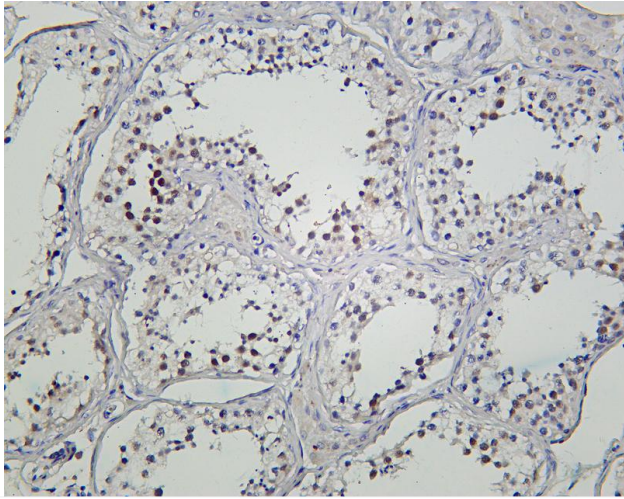
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

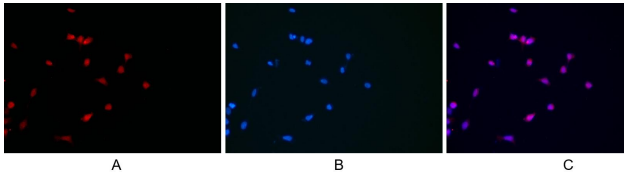


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-SIRT1 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: Jurkat Predicted band size: 81kDa Observed band size: 130kDa

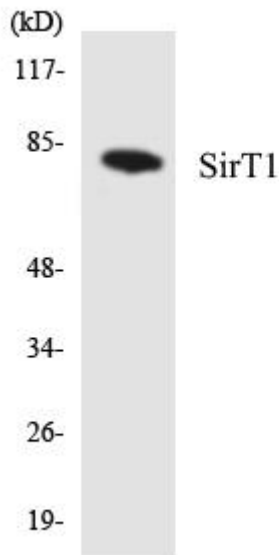




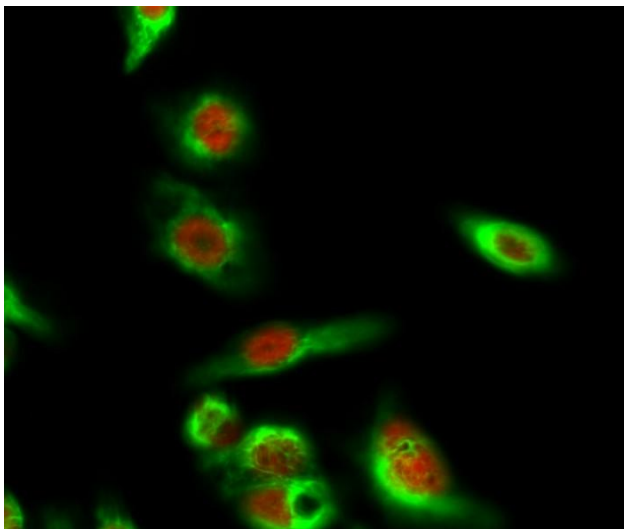
Human testis was stained with Anti-SIRT1 rabbit antibody



Immunofluorescence analysis of HEK293. Picture A: SIRT1 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B



Western blot analysis of the lysates from COLO205 cells using SirT1 antibody.



Immunofluorescence analysis of HeLa cell. 1, SIRT1 Antibody (red) was diluted at 1:200 (4° overnight). LC3B Antibody (green) was diluted at 1:200 (4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog: RS3611 was diluted at 1:1000 (room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog: RS3208 was diluted at 1:1000 (room temperature, 50min).

