



SIRT1 Monoclonal Antibody

Catalog No	YP-Ab-03421
Isotype	IgG
Reactivity	Human;Monkey
Applications	WB;IHC;IF;FCM;ELISA
Gene Name	SIRT1
Immunogen	Purified recombinant fragment of human SIRT1 expressed in E. Coli.
Specificity	SIRT1 Monoclonal Antibody detects endogenous levels of SIRT1 protein.
Formulation	Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol.
Source	Monoclonal, Mouse
Purification	Affinity purification
Dilution	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	NAD-dependent protein deacetylase sirtuin-1;hSIRT1;hSIR2;EC:2.3.1.286; EC:2.3.1.-;SIRT1;NAD-dependent deacetylase sirtuin-1;SIR2L1;Regulatory protein SIR2 homolog 1;SIR2-like protein 1
Calculated Molecular Weight	82kD
Cell Pathway	Nucleus, PML body . Cytoplasm . Nucleus . Recruited to the nuclear bodies via its interaction with PML (PubMed:12006491). Colocalized with APEX1 in the nucleus (PubMed:19934257). May be found in nucleolus, nuclear euchromatin, heterochromatin and inner membrane (PubMed:15469825). Shuttles between nucleus and cytoplasm (By similarity). Colocalizes in the nucleus with XBP1 isoform 2 (PubMed:20955178). .; [SirtT1 75 kDa fragment]: Cytoplasm . Mitochondrion .
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

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

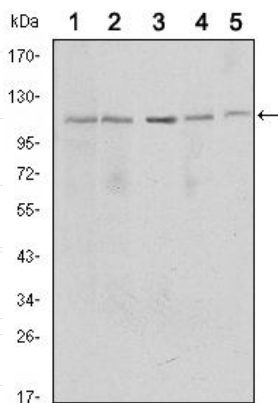
Avoid repeated freezing and thawing!

Usage suggestions

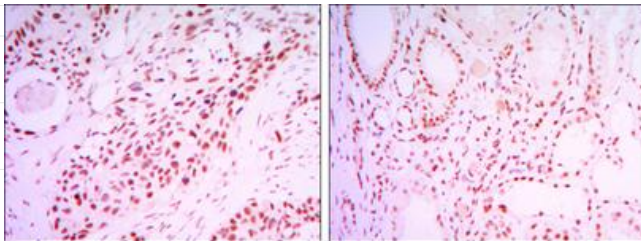
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



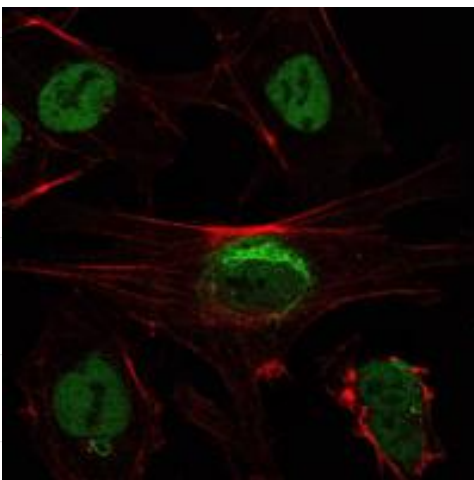
Products Images



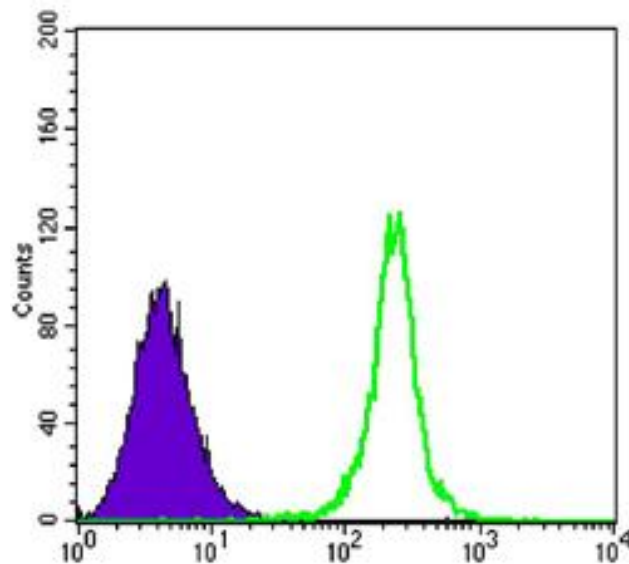
Western Blot analysis using SIRT1 Monoclonal Antibody against MCF-7 (1), Jurkat (2), HeLa (3), HEK293 (4) and A549 (5) cell lysate.



Immunohistochemistry analysis of paraffin-embedded lung cancer tissues (left) and kidney cancer tissues (right) with DAB staining using SIRT1 Monoclonal Antibody.



Immunofluorescence analysis of NTERA-2 cells using SIRT1 Monoclonal Antibody (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of K562 cells using SIRT1 Monoclonal Antibody (green) and negative control (purple).