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SIRT5 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6244a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9NXA8
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2111
Calculated MW	33881
Antigen Region	263-292

Additional Information

Gene ID	23408
Other Names	NAD-dependent protein deacylase sirtuin-5, mitochondrial {ECO:0000255|HAMAP-Rule:MF_03160}, 351-{ECO:0000255|HAMAP-Rule:MF_03160}, Regulatory protein SIR2 homolog 5 {ECO:0000255|HAMAP-Rule:MF_03160}, SIR2-like protein 5 {ECO:0000255|HAMAP-Rule:MF_03160}, SIRT5 {ECO:0000255|HAMAP-Rule:MF_03160}, SIR2L5
Target/Specificity	This SIRT5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 263-292 amino acids from the C-terminal region of human SIRT5.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SIRT5 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SIRT5 {ECO:0000255|HAMAP-Rule:MF_03160}

Synonyms	SIR2L5
Function	NAD-dependent lysine demalonylase, desuccinylase and deglutarylase that specifically removes malonyl, succinyl and glutaryl groups on target proteins (PubMed:21908771, PubMed:22076378, PubMed:24703693, PubMed:29180469). Activates CPS1 and contributes to the regulation of blood ammonia levels during prolonged fasting: acts by mediating desuccinylation and deglutarylation of CPS1, thereby increasing CPS1 activity in response to elevated NAD levels during fasting (PubMed:22076378, PubMed:24703693). Activates SOD1 by mediating its desuccinylation, leading to reduced reactive oxygen species (PubMed:24140062). Activates SHMT2 by mediating its desuccinylation (PubMed:29180469). Modulates ketogenesis through the desuccinylation and activation of HMGCS2 (By similarity). Has weak NAD-dependent protein deacetylase activity; however this activity may not be physiologically relevant in vivo. Can deacetylate cytochrome c (CYCS) and a number of other proteins in vitro such as UOX.
Cellular Location	Mitochondrion matrix. Mitochondrion intermembrane space. Cytoplasm, cytosol. Nucleus. Note=Mainly mitochondrial. Also present extramitochondrially, with a fraction present in the cytosol and very small amounts also detected in the nucleus [Isoform 2]: Mitochondrion {ECO:0000255|HAMAP- Rule:MF_03160, ECO:0000269|PubMed:21143562}
Tissue Location	Widely expressed..

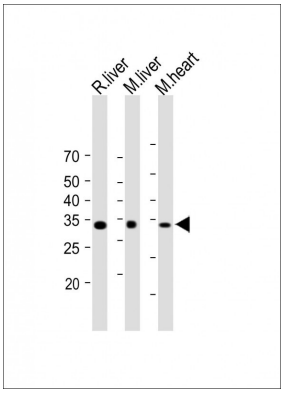
Background

SIRT5 is 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.

References

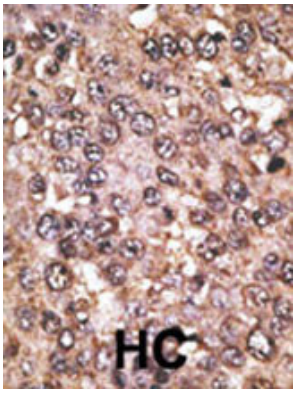
Frye, R.A., Biochem. Biophys. Res. Commun. 273(2):793-798 (2000).
Frye, R.A., Biochem. Biophys. Res. Commun. 260(1):273-279 (1999).

Images

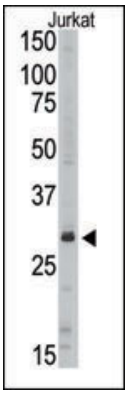


All lanes : Anti-SIRT5 Antibody (C-term) at 1:1000 dilution Lane 1: rat liver lysate Lane 2: mouse liver lysate Lane 3: mouse heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 32kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody,



followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Western blot analysis of anti-SIRT5 Pab (Cat. #AP6244a) in Jurkat cell line lysate (35ug/lane). SIRT5(arrow) was detected using the purified Pab.

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