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KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2080

Product Information

Application	WB, FC, ICC
Primary Accession	Q9NXA8
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	24GB13235
Calculated MW	33881
Gene Name	SIRT5
Aliases	SIRT5; Sirtuin 5; NAD-Dependent Protein Deacylase Sirtuin-5, Mitochondrial; SIR2L5; Sirtuin (Silent Mating Type Information Regulation 2 Homolog) 5 (S. Cerevisiae); Sirtuin (Silent Mating Type Information Regulation 2, S.Cerevisiae, Homolog) 5; NAD-Dependent Lysine Demalonylase And Desuccinylase Sirtuin-5, Mitochondrial; Silent Mating Type Information Regulation 2, S.Cerevisiae, Homolog 5; NAD-Dependent Deacetylase Sirtuin-5; Regulatory Protein SIR2 Homolog 5; SIR2-Like Protein 5; Sirtuin Type 5; Sir2-Like 5; EC 2.3.1.-
Immunogen	Recombinant protein of human SIRT5

Additional Information

Gene ID	23408
Other Names	NAD-dependent protein deacylase sirtuin-5, mitochondrial {ECO:0000255|HAMAP-Rule:MF_03160}, 2.3.1.- {ECO:0000255|HAMAP-Rule:MF_03160, ECO:0000269|PubMed:22076378, ECO:0000269|PubMed:24703693, ECO:0000269|PubMed:29180469}, 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

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..