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KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2080

Specification

KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q9NXA8
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 34 kDa, observed, 30 kDa KDa**
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**

KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody - 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

KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody - 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..

KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody - Images

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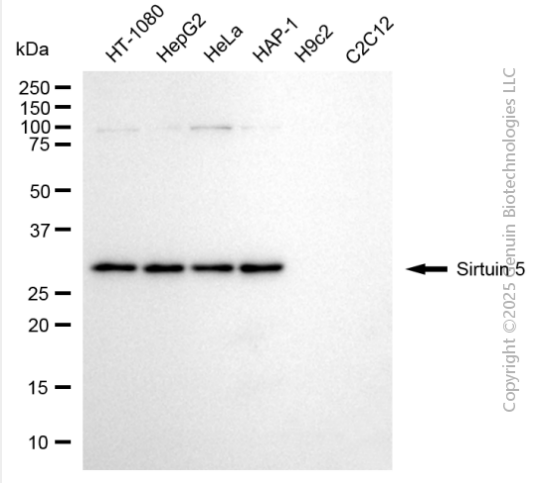
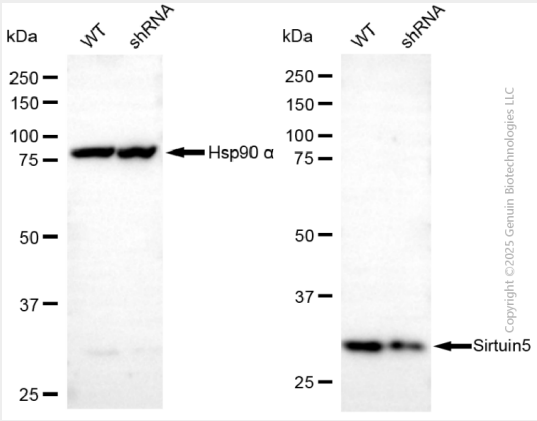
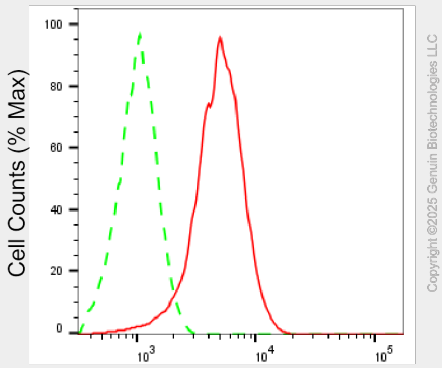


Western blotting analysis using anti-sirtuin 5 antibody (Cat#AGI2080). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-sirtuin 5 antibody (Cat#AGI2080, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-sirtuin 5 antibody (Cat#AGI2080). Sirtuin 5 expression in wild-type (WT) and sirtuin 5 (SIRT5) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-sirtuin 5 antibody (Cat#AGI2080, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Sirtuin 5-Alexa Fluor® 647

Flow cytometric analysis of Sirtuin 5 expression in HepG2 cells using anti-Sirtuin 5 antibody (Cat#AGI2080, 1:2,000). Green, isotype control; red, Sirtuin 5.

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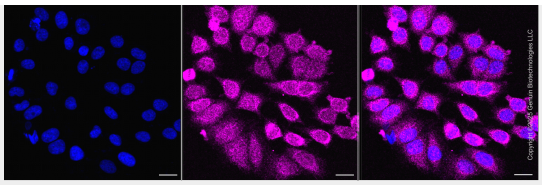

Immunocytochemical staining of HepG2 cells with anti-Sirtuin 5 associated protein antibody (Cat#AGI2080, 1:1,000). Nuclei were stained blue with DAPI; Sirtuin 5 associated protein was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.