

**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	<a href="#">Q9NXA8</a>
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 Deacetylase 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 deacetylase 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:<a href="http://www.uniprot.org/citations/21908771" target="\_blank">21908771</a>, PubMed:<a href="http://www.uniprot.org/citations/22076378" target="\_blank">22076378</a>, PubMed:<a href="http://www.uniprot.org/citations/24703693" target="\_blank">24703693</a>, PubMed:<a href="http://www.uniprot.org/citations/29180469" target="\_blank">29180469</a>). 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:<a href="http://www.uniprot.org/citations/22076378" target="\_blank">22076378</a>, PubMed:<a href="http://www.uniprot.org/citations/24703693" target="\_blank">24703693</a>). Activates SOD1 by mediating its desuccinylation, leading to reduced reactive oxygen species (PubMed:<a href="http://www.uniprot.org/citations/24140062" target="\_blank">24140062</a>). Activates SHMT2 by mediating its desuccinylation (PubMed:<a href="http://www.uniprot.org/citations/29180469" target="\_blank">29180469</a>). 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**

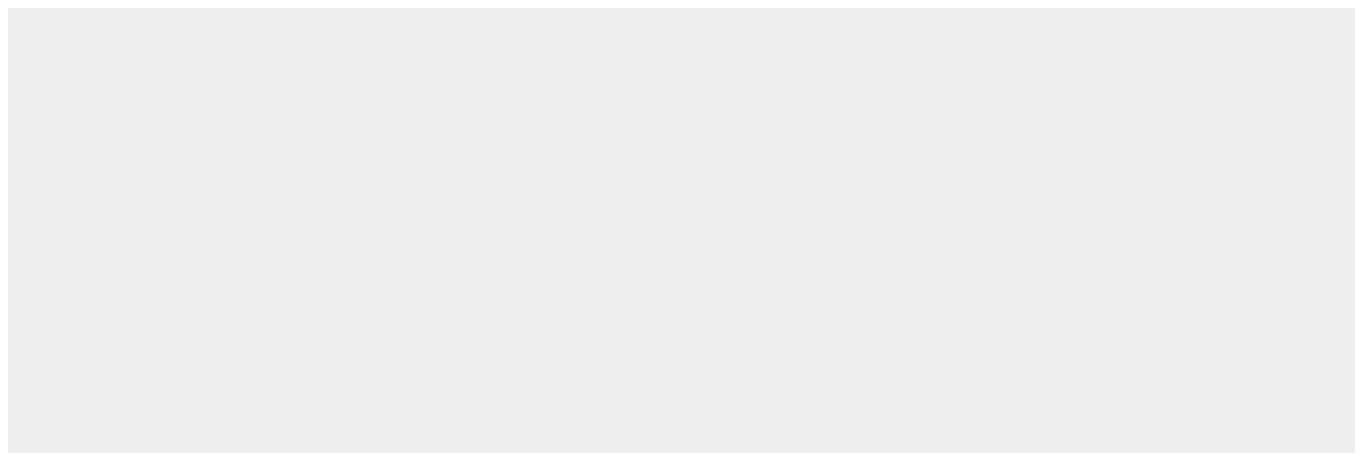
Widely expressed..

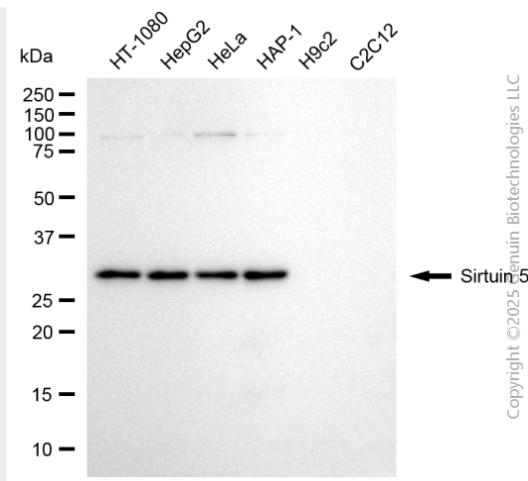
### **KD-Validated Anti-Sirtuin 5 Mouse Monoclonal Antibody - Protocols**

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

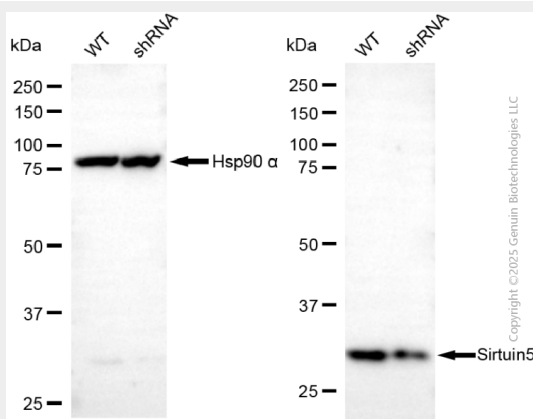
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

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

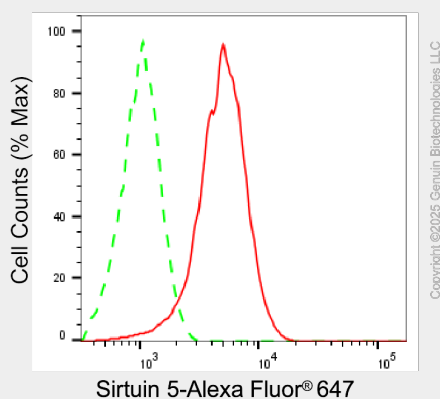




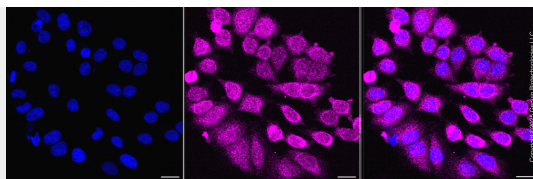
Western blotting analysis using anti-sirtuin 5 antibody (Cat#AGI2080). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-sirtuin 5 antibody (Cat#AGI2080, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



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.



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.



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  $\mu$ m.