

Product datasheet

Anti-SIRT5 antibody ab105040

2 References 2 Images

Overview

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<b>Product name</b>	Anti-SIRT5 antibody
<b>Description</b>	Rabbit polyclonal to SIRT5
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human  <b>Predicted to work with:</b> Mouse, Cow, Dog, Pig, Macaque monkey, Orangutan 
<b>Immunogen</b>	Synthetic peptide corresponding to Human SIRT5 aa 150-250 conjugated to keyhole limpet haemocyanin. (Peptide available as <a href="#">ab117890</a> )
<b>Positive control</b>	This antibody gave a positive signal in Human small intestine tissue lysate.
<b>General notes</b>	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&amp;As.</p>

Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab105040** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

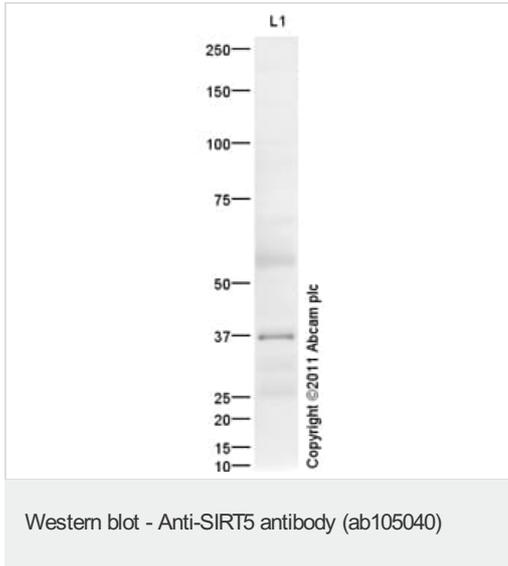
Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 37 kDa (predicted molecular weight: 34 kDa).
ICC/IF		Use a concentration of 5 µg/ml.

## Target

<b>Function</b>	NAD-dependent lysine demalonylase, desuccinylase and deglutarylase that specifically removes malonyl, succinyl and glutaryl groups on target proteins (PubMed:21908771, PubMed:22076378, PubMed:24703693). 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). 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.
<b>Tissue specificity</b>	Widely expressed.
<b>Sequence similarities</b>	Belongs to the sirtuin family. Class III subfamily. Contains 1 deacetylase sirtuin-type domain.
<b>Domain</b>	In contrast to class I sirtuins, class III sirtuins have only weak deacetylase activity. Difference in substrate specificity is probably due to a larger hydrophobic pocket with 2 residues (Tyr-102 and Arg-105) that bind to malonylated and succinylated substrates and define the specificity (PubMed:22076378).
<b>Cellular localization</b>	Mitochondrion; Cytoplasm. Mitochondrion and Mitochondrion matrix. Mitochondrion

intermembrane space. Cytoplasm, cytosol. Nucleus. Mainly mitochondrial. Also present extramitochondrially: a fraction is present in the cytosol and very small amounts are also detected in the nucleus.

## Images



Anti-SIRT5 antibody (ab105040) at 1  $\mu$ g/ml + Human small intestine tissue lysate - total protein (ab29276) at 10  $\mu$ g

### Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 34 kDa

**Observed band size:** 37 kDa

[why is the actual band size different from the predicted?](#)

**Additional bands at:** 56 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 20 minutes

The predicted molecular weight of SIRT5 is 34 kDa (SwissProt), however we expect to observe a banding pattern at 37 kDa. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.



Immunocytochemistry/ Immunofluorescence - Anti-SIRT5 antibody (ab105040)

ICC/IF image of ab105040 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab105040, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This antibody also gave a positive result in 100% methanol fixed (5 min) HepG2 and MCF7 cells at 5µg/ml.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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