**Product datasheet**

**Anti-SIRT3 antibody ab86671**

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**Overview**

- **Product name**: Anti-SIRT3 antibody
- **Description**: Rabbit polyclonal to SIRT3
- **Host species**: Rabbit
- **Specificity**: Strongly expressed in liver and kidney. Weakly expressed in lung.
- **Tested applications**: Suitable for: ICC/IF, WB, IHC-P
- **Species reactivity**: Reacts with: Mouse, Cynomolgus monkey, Chinese hamster
- **Immunogen**: Synthetic peptide corresponding to Mouse SIRT3 aa 317-330 (C terminal) conjugated to Keyhole Limpet Haemocyanin (KLH).
  - **Sequence**: `ELLDLMQRERGKLD`
  - **Database link**: [Q8R104](#) (Peptide available as [ab176315](#))
- **Positive control**: WB: Mouse brain tissue lysate. CHO whole cell lysate. ICC/IF: HepG2 cells. IHC-P: Human breast carcinoma tissue.

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**Properties**

- **Form**: Liquid
- **Storage buffer**: Preservative: 0.09% Sodium azide
  - **Constituent**: PBS
- **Purity**: Immunogen affinity purified
- **Purification notes**: ab86671 is purified through a protein A column, followed by peptide affinity purification.
- **Clonality**: Polyclonal
- **Isotype**: IgG

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**Applications**

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Our Abpromise guarantee covers the use of ab86671 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 5 µg/ml.</td>
</tr>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/1000. Predicted molecular weight: 36.6 kDa.</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>1/50 - 1/100.</td>
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</tbody>
</table>

**Target**

**Function**
NAD-dependent protein deacetylase. Activates or deactivates mitochondrial target proteins by deacetylating key lysine residues. Known targets include ACSS1, IDH, GDH, SOD2, PDHA1, LCAD, SDHA and the ATP synthase subunit ATP5O. Contributes to the regulation of the cellular energy metabolism. Important for regulating tissue-specific ATP levels.

**Tissue specificity**
Widely expressed.

**Sequence similarities**
Belongs to the sirtuin family. Class I subfamily. Contains 1 deacetylase sirtuin-type domain.

**Post-translational modifications**
Processed by mitochondrial processing peptidase (MPP) to give a 28 kDa product. Such processing is probably essential for its enzymatic activity.

**Cellular localization**
Mitochondrion matrix.

**Images**

Anti-SIRT3 antibody (ab86671) at 1/1000 dilution + Mouse brain tissue lysate at 35 µg/ml

**Secondary**
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/5000 dilution

**Predicted band size**: 36.6 kDa
**Observed band size**: 36 kDa

Why is the actual band size different from the predicted?

Incubation time was overnight at 4°C. Blocking/Dilution buffer: 5% NFDM/TBST.
Anti-SIRT3 antibody (ab86671) at 1/1000 dilution + CHO whole cell lysate at 35 µg

**Secondary**
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/5000 dilution

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Why is the actual band size different from the predicted?

Incubation time was overnight at 4°C. Blocking/Dilution buffer: 5% NFDM/TBST.

ICC/IF image of ab86671 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 (ab86671, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 rabbit 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.

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