

DESCRIPTION

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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human Sirtuin 5/SIRT5 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) SIRT1, rhSIRT2, and rhSIRT6 is observed. |
| Source | Polyclonal Sheep IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Sirtuin 5/SIRT5 Met33-Ser310 Accession # Q9NXA8 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

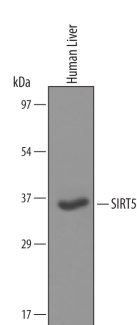
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

| | Recommended Concentration | Sample |
|-----------------------------|----------------------------------|--|
| Western Blot | 1 µg/mL | See Below |
| Immunohistochemistry | 5-15 µg/mL | See Below |
| Immunoprecipitation | 25 µg/mL | Conditioned cell culture medium spiked with Recombinant Human Sirtuin 5/SIRT5, see our available Western blot detection antibodies |

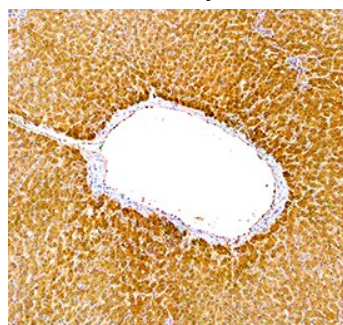
DATA

Western Blot



Detection of Human Sirtuin 5/SIRT5 by Western Blot. Western blot shows lysates of human liver tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Sirtuin 5/SIRT5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5914) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Sirtuin 5/SIRT5 at approximately 35 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 8](#).

Immunohistochemistry



Sirtuin 5/SIRT5 in Human Liver.

Sirtuin 5/SIRT5 was detected in immersion fixed paraffin-embedded sections of human liver using Sheep Anti-Human Sirtuin 5/SIRT5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5914) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to hepatocyte cytoplasm. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

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|--------------------------------|--|
| Reconstitution | Reconstitute at 0.2 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

Sirtuin 5 (SIRT5; SIR2-like protein 5) is a 28-35 kDa class III member of the sirtuin protein family. It is found in the mitochondrial matrix and is involved in ammonia detoxification. In particular, it deacetylates carbamoyl phosphate synthetase 1/CPS1, thus activating it and allowing for ammonia condensation with bicarbonate and ATP. This is a crucial step in urea formation during prolonged fasting or the use of a high-protein diet. Human SIRT5 is 310 amino acids (aa) in length. It possesses a sirtuin-type deacetylase domain (aa 41-309) that contains an NAD binding motif (Thr276:Glu277:Pro292). There are three potential isoform variants that show aa substitutions at the C-terminus. One contains a 14 aa substitution for aa 286-310, a second shows a 15 aa substitution for aa 287-310, and the third shows a 17 aa substitution for aa 207-310. Full-length human and mouse SIRT5 share 86% aa identity.