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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION



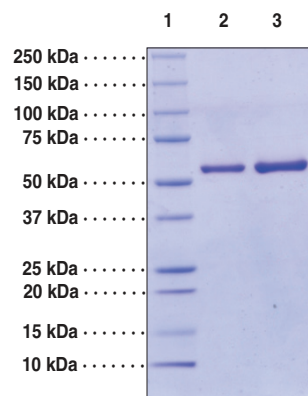
SIRT5 (human, recombinant)

Item No. 10318

Overview and Properties

| | |
|--------------------------------|---|
| Synonyms: | Mitochondrial Regulatory Protein SIR2 Homolog 5, NAD-dependent Deacetylase 5, NAD-dependent Protein Deacylase Sirtuin-5, Silent Information Regulator 5, SIR2L5, SIR2-like Protein 5, Sirtuin 5 |
| Source: | Recombinant human N-terminal GST-tagged enzyme purified from <i>E. coli</i> |
| Amino Acids: | 33-310 |
| Uniprot No.: | Q9NXA8 |
| Molecular Weight: | 60.6 kDa |
| Storage: | -80°C (as supplied) |
| Stability: | ≥2 years |
| Purity: | <i>batch specific</i> (≥85% estimated by SDS-PAGE) |
| Supplied in: | 50 mM NaPO ₄ , pH 7.2, with 100 mM sodium chloride, 5 mM DTT, 20% glycerol |
| Protein Concentration: | <i>batch specific</i> mg/ml |
| Additional Information: | This protein has not been tested for enzyme activity. |

Image



Lane 1: MW Markers
Lane 2: SIRT5 (4 μg)
Lane 3: SIRT5 (2 μg)

Representative gel image shown; actual purity may vary between each batch but protein will be ≥85% pure.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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PRODUCT INFORMATION



Description

Sirtuin 5 (SIRT5) is an enzyme that catalyzes the NAD-dependent removal of malonyl, succinyl, and glutaryl groups from target proteins.^{1,2} Although it was originally characterized as a class III histone deacetylase (HDAC), SIRT5 exhibits weak NAD-dependent deacetylase activity *in vitro* and *in vivo*. SIRT5 is localized to mitochondria and is composed of a zinc binding domain and a Rossmann fold domain with the NAD and substrate binding sites located at the domain interface.¹ Knockdown of *Sirt5* induces hepatic and muscle protein hypersuccinylation, as well as fatty acid oxidation defects and hypertrophic cardiomyopathy in mice.³ SIRT5 protein and mRNA expression is elevated in human non-small cell lung cancer (NSCLC) tumors and is predictive of tumor recurrence and poor survival.⁴ SIRT5 also interacts with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) non-structural protein 14 (Nsp14), an exoribonuclease component of the viral replicase-transcriptase complex.⁵ Cayman's SIRT5 (human, recombinant) protein can be used for ELISA and western blot applications.

References

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3. Sadhukhan, S., Liu, X., Ryu, D., *et al.* Metabolomics-assisted proteomics identifies succinylation and SIRT5 as important regulators of cardiac function. *PNAS* **113(16)**, 4320-4325 (2016).
4. Bringman-Rodenbarger, L.R., Guo, A.H., Lyssiotis, C.A., *et al.* Emerging roles for SIRT5 in metabolism and cancer. *Antioxid. Redox Signal.* **28(8)**, 677-690 (2018).
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