

PRODUCT INFORMATION



SIRT6 (human recombinant)

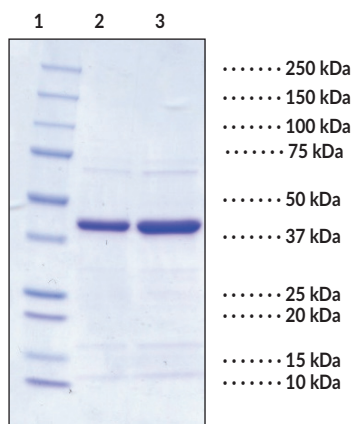
Item No. 10315

Overview and Properties

Synonyms:	NAD-dependent Deacetylase 6, Silent Information Regulator 6, SIR2L6, SIR2-like Protein 6, Sirtuin 6
Source:	Recombinant N-terminal His-tagged enzyme purified from <i>E. coli</i>
Amino Acids:	1-355
Uniprot No.:	Q8N6T7
Molecular Weight:	43.7 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	<i>batch specific</i> (≥80% estimated by SDS-PAGE)
Supplied in:	25 mM Tris-HCl, pH 8.0, with 100mM NaCl, 20% glycerol
Protein Concentration:	<i>batch specific</i> mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: SIRT6 (2 μg)
Lane 3: SIRT6 (4 μg)

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
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Description

The sirtuins represent a distinct class of trichostatin A-insensitive lysyl-deacetylases (class III HDACs) and have been shown to catalyze a reaction that couples lysine deacetylation to the formation of nicotinamide and O-acetyl-ADP-ribose from NAD⁺ and the abstracted acetyl group.¹⁻³ There are seven human sirtuins, which have been designated SIRT1-7.⁴ SIRT6 associates specifically with telomeres and functions at chromatin to decrease NF-κB signaling.^{5,6} Mammalian cells depleted of SIRT6 display abnormal telomere structures similar to defects found in Werner syndrome, a premature ageing disorder, and have a shortened life span.^{5,6} Since SIRT6 binds and attenuates NF-κB signaling, it is proposed that activators of SIRT6 may be effective anti-cancer and anti-inflammatory drugs and may increase longevity.⁵

References

1. Imai, S.-I., Armstrong, C.M., Kaeberlein, M., *et al.* Transcriptional silencing and longevity protein Sir2 is an NAD-dependent histone deacetylase. *Nature* **403**, 795-800 (2000).
2. Tanner, K.G., Landry, J., Sternglanz, R., *et al.* Silent information regulator 2 family of NAD-dependent histone/protein deacetylases generates a unique product, 1-O-acetyl-ADP-ribose. *Proc. Natl. Acad. Sci. USA* **97(26)**, 14178-14182 (2000).
3. Tanny, J.C. and Moazed, D. Coupling of histone deacetylation to NAD breakdown by the yeast silencing protein Sir2: Evidence for acetyl transfer from substrate to an NAD breakdown product. *Proc. Natl. Acad. Sci. USA* **98(2)**, 415-420 (2001).
4. Frye, R.A. Phylogenetic classification of prokaryotic and eukaryotic Sir2-like proteins. *Biochem. Biophys. Res. Commun.* **273**, 793-798 (2000).
5. Kawahara, T.L.A., Michishita, E., Adler, A.S., *et al.* SIRT6 links histone H3 lysine 9 deacetylation to NF-κB-dependent gene expression and organismal life span. *Cell* **136**, 62-74 (2009).
6. Michishita, E., McCord, R.A., Berber, E., *et al.* SIRT6 is a histone H3 lysine 9 deacetylase that modulates telomeric chromatin. *Nature* **452**, 492-496 (2008).

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