PRODUCT INFORMATION

SIRT6 (human, recombinant)

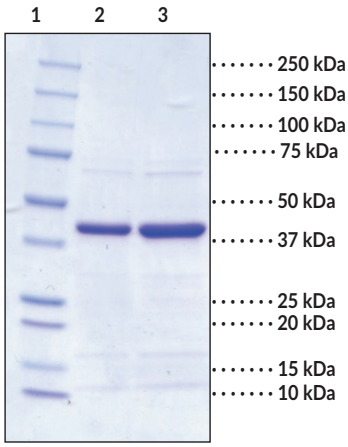
Item No. 10315

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 expressed in *E. coli*
Amino Acids:	1-355
Uniprot No.:	Q8N6T7
Molecular Weight:	43.7 kDa
Storage:	-80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability:	≥1.5 years
Purity:	≥80% estimated by SDS-PAGE
Supplied in:	25 mM Tris-HCl, pH 8.0, with 100mM NaCl, 20% glycerol
Protein Concentration:	***batch specific*** 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)

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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-kB-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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