

## SIRT3 Protein

Full-length recombinant protein expressed in *E. coli* cells

**Catalog # S37-30EG**

Lot # M346-4

### Product Description

Full-length recombinant human SIRT3 was expressed in *E. coli* cells using an N-terminal GST tag. The gene accession number is [NM\\_012239](#).

### Gene Aliases

SIR2L3, Sirtuin 3

### Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.

### Storage and Stability

Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

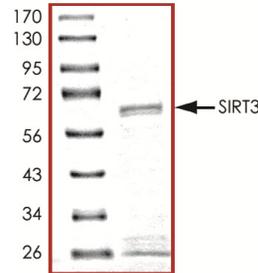
### Scientific Background

SIRT3 is a member of the sirtuin family of proteins which are homologs to the yeast Sir2 protein. Sirtuin family contain a sirtuin core domain and are grouped into four classes with SIRT3 being a member of class I. SIRT3 contains an N-terminal mitochondrial targeting signal and a central catalytic domain and localizes in the nuclei and mitochondria (1). SIRT3 has NAD(+)-dependent histone deacetylase activity with specificity for lys16 of H4 and, to a lesser extent, lys9 of H3. SIRT3 can repress transcription of a target gene in vivo when recruited to its promoter. Full-length SIRT3 is transported from the nucleus to the mitochondria during cell stress conditions (2).

### References

1. Onyango, P. et al: SIRT3, a human SIR2 homologue, is an NAD-dependent deacetylase localized to mitochondria. *Proc. Nat. Acad. Sci.* 99: 13653-13658, 2002.
2. Scher, M. B. et al: SirT3 is a nuclear NAD(+)-dependent histone deacetylase that translocates to the mitochondria upon cellular stress. *Genes Dev.* 21: 920-928, 2007.

### Purity



The purity was determined to be **>75%** by densitometry. Approx. MW **66kDa**.

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Catalog Number **S37-30EG**

Specific Lot Number **M346-4**

Purity	>75%
Concentration	0.2µg/µl
Stability	1yr at $-70^{\circ}\text{C}$ from date of shipment
Storage & Shipping	Store product at $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice.

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