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Product Information

SIRT1, active, His-tagged, human recombinant, expressed in *Sf*9 cells

Catalog Number **SRP5270**
Storage Temperature –70 °C

Synonym: SIR2L1

Product Description

SIRT1 is a member of the sirtuin family of proteins, which are homologs to the yeast Sir2 protein. The sirtuin family contains a sirtuin core domain and is grouped into four classes with SIRT1 being a member of class I. SIRT1 is a stress-response and chromatin-silencing factor.[1] It is an NAD^+-dependent histone deacetylase involved in various nuclear events such as transcription, DNA replication, and DNA repair. SIRT1 protein binds and deacetylates the p53 protein.[2] Expression of wildtype SIRT1 in human cells reduces the transcriptional activity of p53 indicating SIRT1 is involved in the regulation of p53 function via deacetylation.

Recombinant human SIRT1 (193-end) was expressed by baculovirus in *Sf*9 insect cells using an N-terminal His-tag. The gene accession number is NM_012238. It is supplied in 50 mM sodium phosphate, pH 7.0, 300 mM NaCl, 150 mM imidazole, 0.1 mM PMSF, 0.25 mM DTT, and 25% glycerol.

Molecular mass: ~84 kDa

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at –70 °C is recommended. After opening, aliquot into smaller quantities and store at –70 °C. Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot:
≥70% (SDS-PAGE, densitometry)

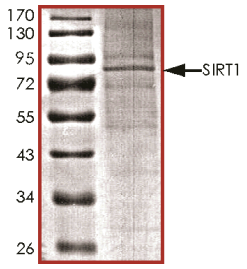
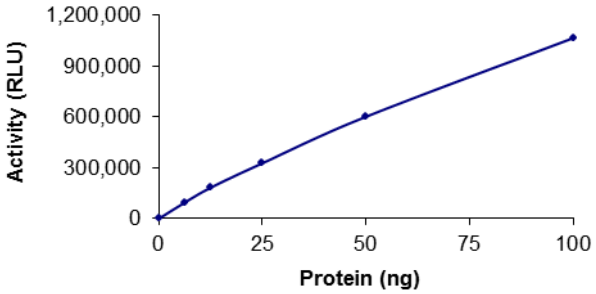


Figure 2.
Specific Activity of Typical Lot:
1,573–2,415 RLU/min/ng



Histone deacetylase (HDAC) activity was determined with a luminescent assay procedure.

References

1. Tanny, J.C. et al., An enzymatic activity in the yeast Sir2 protein that is essential for gene silencing. Cell, **99**, 735-745 1999.
2. Vaziri, H. et al., hSIR2-SIRT1 functions as an NAD-dependent p53 deacetylase. Cell, **107**, 149-159 2001.

RC,MAM 12/12-1