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Product Information

SIRT3, active, GST tagged, human recombinant, expressed in *Sf*9 cells

Catalog Number **SRP5275**
Storage Temperature –70 °C

Synonyms: ALK-6, ALK6, CDw293

Product Description

SIRT3 is a member of the class I of the Sirtuin family that is characterized by a Sirtuin core domain. Sirtuins are grouped into four classes and are homologs to the Sir2 protein. SIRT3 is known to regulate the epigenetic gene silencing and suppresses recombination of rDNA.[1] SIRT3 may function as an intracellular regulatory protein with mono-ADP-ribosyltransferase activity that is essential for its silencing function. SIRT3 regulates and maintains basal ATP levels in the cell.[2] SIRT3 also modulates mitochondrial intermediary metabolism and fatty acid use during fasting.[3]

Recombinant human SIRT3 (47-end) was expressed by baculovirus in *Sf*9 insect cells using a C-terminal GST-tag. The gene accession number is NM_012239. It is supplied in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, and 25% glycerol.

Molecular mass: ~66 kDa

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the 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)

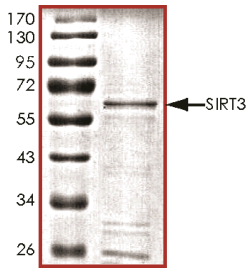
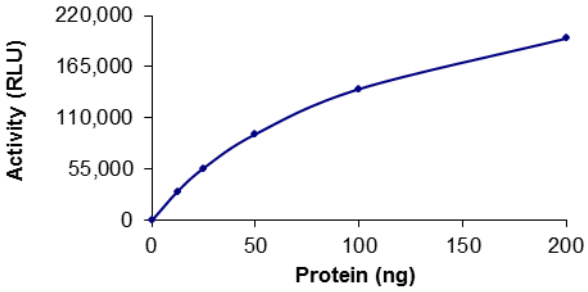


Figure 2.
Specific Activity of Typical Lot:
123–196 RLU/min/ng



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. Ahn, B.-H. et al., A role for the mitochondrial deacetylase Sirt3 in regulating energy homeostasis. Proc. Nat. Acad. Sci., **105**, 14447-14452 (2008).
3. Hirschey, M.D. et al., SIRT3 regulates mitochondrial fatty-acid oxidation by reversible enzyme deacetylation. Nature, **464**, 121-125 (2010).

KNV,RC,MAM 6/15-1