

## SIRT3 recombinant protein

SIRT3, Active

|                              |                                                   |                                   |
|------------------------------|---------------------------------------------------|-----------------------------------|
| CATALOG #<br><b>AAA73140</b> | HOST<br><b>Sf9 insect cells using baculovirus</b> | APPLICATIONS<br><b>SIRT Assay</b> |
|------------------------------|---------------------------------------------------|-----------------------------------|

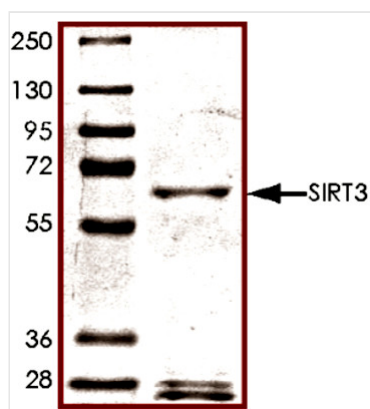
### PRODUCT SYNONYMS

SIRT3; Active; SIRT3 recombinant protein

### PRODUCT SPECIFICATIONS

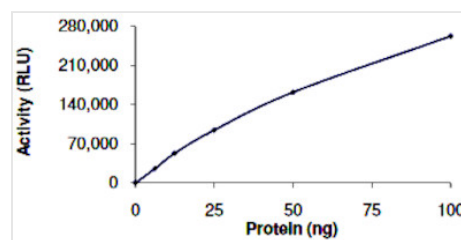
|                                                       |                                                                                                                                                                                                                                                      |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                                  | Sf9 insect cells using baculovirus                                                                                                                                                                                                                   |
| Purity/Purification                                   | >70%                                                                                                                                                                                                                                                 |
| Form/Format                                           | 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.                                                                                                                                               |
| Concentration                                         | 0.1 ug/uL (varies by lot)                                                                                                                                                                                                                            |
| Sequence Positions                                    | 47-end                                                                                                                                                                                                                                               |
| Sequence Length                                       | 2919                                                                                                                                                                                                                                                 |
| Applicable Applications for SIRT3 recombinant protein | SIRT Assay                                                                                                                                                                                                                                           |
| Species                                               | Human                                                                                                                                                                                                                                                |
| Tag                                                   | GST tag                                                                                                                                                                                                                                              |
| Dry Ice Note                                          | The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.                                                                                                                                                   |
| Preparation and Storage                               | Store product at -70 degree C.<br>For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature.<br>For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. |

### IMAGES



#### Application Data

The purity of SIRT3 was determined to be &gt;70% by densitometry, approx. MW 66kDa.



#### Application Data

The specific activity of SIRT3 was determined to be 170 RLU/min/mg as per activity assay protocol.

ADDITIONAL INFORMATION

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for SIRT3 recombinant protein | <p>Description: Recombinant human SIRT3 (47-end) was expressed by baculovirus in Sf9 insect cells using a C-terminal GST tag.</p> <p>Scientific Background: SIRT3 is a member of the class I of the Sirtuin family that is characterized by a Sirtuin core domain. Sirtuin 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).</p> |
| Product Categories/Family for SIRT3 recombinant protein   | Enzymes; Active Histone Deacetylases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 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.                                                                                                                                                                                                                                                                                                                                      |

NCBI AND UNIPROT INFORMATION

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| NCBI GI #                        | 157671924                                                  |
| NCBI GeneID                      | 23410                                                      |
| NCBI Accession #                 | NM_012239.5                                                |
| NCBI GenBank Nucleotide #        | NM_012239                                                  |
| UniProt Accession #              | Q9NTG7; Q9Y6E8; B7Z5U6                                     |
| Molecular Weight                 | 66 kDa                                                     |
| NCBI Official Full Name          | Homo sapiens sirtuin 3 (SIRT3), transcript variant 1, mRNA |
| NCBI Official Synonym Full Names | sirtuin 3                                                  |
| NCBI Official Symbol             | SIRT3                                                      |
| NCBI Official Synonym Symbols    | SIR2L3                                                     |
| NCBI Protein Information         | NAD-dependent protein deacetylase sirtuin-3, mitochondrial |
| UniProt Protein Name             | NAD-dependent protein deacetylase sirtuin-3, mitochondrial |
| UniProt Gene Name                | SIRT3                                                      |
| UniProt Synonym Gene Names       | SIR2L3; hSIRT3                                             |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.