

## Recombinant Human Sirtuin 1, GST-tagged

**Cat. No.** SIRT1-4874H    **Lot. No.** (See product label)

### SPECIFICATION

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Product Overview</b>  | Recombinant human SIRT1 (193-end) was expressed in E. coli cells using an N-terminal GST tag.                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>            | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>     | 193-end a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>       | SIRT1 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 SIRT1 being a member of class I. SIRT1 is a stress-response and chromatin-silencing factor. 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. |
| <b>Applications</b>      | Western Blot                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Molecular Weight</b>  | 105 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Expression System</b> | E. coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Form</b>              | Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1mM PMSF, 25 % glycerol.                                                                                                                                                                                                                                                                                                                                        |

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|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>        | > 80 %                                                                                                                                                                                                                                                                                       |
| <b>Concentration</b> | 0.2 ug/ul                                                                                                                                                                                                                                                                                    |
| <b>Sequences</b>     | 193-end                                                                                                                                                                                                                                                                                      |
| <b>Storage</b>       | Store product at -70°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.                                                      |
| <b>Pathways</b>      | E2F transcription factor network; Energy Metabolism; FoxO family signaling; HIF-2-alpha transcription factor network; Regulation of Androgen receptor activity; Regulation of retinoblastoma protein; Signaling events mediated by HDAC Class I; Signaling events mediated by HDAC Class III |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <a href="#">SIRT1 sirtuin 1 [ Homo sapiens ]</a>                                                                                                                                                                                                                                                                                                                                                      |
| <b>Official Symbol</b> | <a href="#">SIRT1</a>                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Synonyms</b>        | SIRT1; sirtuin 1; SIR2L1; NAD-dependent deacetylase sirtuin-1; hSIR2; hSIRT1; SIR2alpha; sir2-like 1; sirtuin type 1; OTTHUMP00000019691; OTTHUMP000000198112; SIR2-like protein 1; EC 3.5.1.-; sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae); sirtuin (silent mating type information regulation 2, S. cerevisiae, homolog) 1; NAD-dependent deacetylase sirtuin-1 |
| <b>Gene ID</b>         | <a href="#">23411</a>                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>mRNA Refseq</b>     | <a href="#">NM_001142498</a>                                                                                                                                                                                                                                                                                                                                                                          |

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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Protein Refseq</b>      | NP_001135970                                                                                                                                                                                                                                                                                                                                               |
| <b>MIM</b>                 | 604479                                                                                                                                                                                                                                                                                                                                                     |
| <b>UniProt ID</b>          | Q96EB6                                                                                                                                                                                                                                                                                                                                                     |
| <b>Chromosome Location</b> | 10q21                                                                                                                                                                                                                                                                                                                                                      |
| <b>Function</b>            | NAD binding; NAD+ ADP-ribosyltransferase activity; NAD-dependent histone deacetylase activity; deacetylase activity; histone binding; hydrolase activity; identical protein binding; metal ion binding; p53 binding; protein C-terminus binding; protein domain specific binding; transcription corepressor activity; zinc ion binding; HLH domain binding |

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