



NAD(+)-Dependent Deacetylase SIRT3

Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures

NAD(+)-Dependent Deacetylase SIRT3

Human, recombinant protein expressed in *E. coli.*, Active

Cat# CY-E1153

Amount: 100µg (1.0 µg/µl)

Lot:

Specific Activity: 0.046 units/µg

Introduction:

Sir2 is a conserved protein and was recently shown to regulate lifespan extension both in budding yeast and nematode. In 2000, it was reported that the yeast Sir2 protein is a NAD(+)-dependent histone deacetylase that plays a critical role in transcriptional silencing, genome stability and longevity. In mammals, the homologs of Sir2 have been named sirtuins (SIRT), with seven members in a family termed SIRT1 through SIRT7. They share a conserved central deacetylase domain but have different N- and C termini and display distinct subcellular localization, suggesting different biological functions.

Human SIRT3 is a mitochondria protein, with its N-terminal 25 amino acid residues responsible for its mitochondrial localization. Synthesized as an enzymatically inactive protein, human SIRT3 is activated by mitochondrial matrix processing peptidase to active 28-kD active enzyme. These observations suggest that the existence of a latent class III deacetylase that becomes catalytically activated upon import into the human mitochondria.

Product Description:

Human SIRT3, containing an N-terminal GST tag, expressed in *E. coli.* and purified by GSH agarose chromatography.

Gene Information:

The gene accession number is NM_012239

Gene Aliases:

SIR2L3, Sirtuin 3

Formulation:

Recombinant SIRT3 is supplied frozen in a buffer containing 50mM NaCl, 20mM Hepes-KOH (pH 7.5), 1mM DTT, 1mM EDTA and 50% glycerol. Use a same buffer without glycerol for dilution when needed.

Molecular Weight:

Recombinant SIRT3 demonstrates approximately 56 kDa band by SDS-PAGE analysis.

Storage:

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.

Stability:

Unopened vial at -70 °C, for 1 year after delivery.



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Unit Definitions:

One unit is defined as the amount of deacetylase required to release 1 nmol of acetyl groups from CycLex's Fluoro-Substrate Peptide included in Cat# CY-1151 per minute at 20°C. Specific Activity will vary among production lots.

References:

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Related Products

- * CycLex NAD(+)-Dependent Deacetylase SIRT1: Cat# CY-E1151
- * CycLex NAD(+)-Dependent Deacetylase SIRT2: Cat# CY-E1152
- * CycLex NAD(+)-Dependent Deacetylase SIRT3: Cat# CY-E1153
- * CycLex NAD(+)-Dependent Deacetylase SIRT6: Cat# CY-E1156
- * CycLex HDACs Deacetylase Fluorometric Assay Kit: Cat# CY-1150
- * CycLex SIRT1 Deacetylase Fluorometric Assay Kit: Cat# CY-1151
- * CycLex SIRT2 Deacetylase Fluorometric Assay Kit: Cat# CY-1152
- * CycLex SIRT3 Deacetylase Fluorometric Assay Kit: Cat# CY-1153
- * CycLex SIRT6 Deacetylase Fluorometric Assay Kit: Cat# CY-1156
- * CycLex HDAC8 Deacetylase Fluorometric Assay Kit: Cat# CY-1158
- * CycLex NAMPT (Nicotinamide Phosphoribosyltransferase): Cat# CY-E1251
- * CycLex NMNAT1 (Nicotinamide Mononucleotide Adenylyltransferase 1): Cat# CY-E1252

PRODUCED BY

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