



NAD(+)-Dependent Deacetylase SIRT2

Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures

NAD(+)-Dependent Deacetylase SIRT2

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

Cat# CY-E1152

Amount: 100µg (1.0 µg/µl)

Lot:

Specific Activity: 0.032 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.

In contrast to SIRT1, mammalian SIRT2 is localized mainly in the cytoplasm. SIRT2 colocalizes with the microtubule network and deacetylates Lys40 of alpha-tubulin. The same residue of alpha-tubulin is also deacetylated by HDAC6, a class II HDAC, and deacetylation by HDAC6 leads to changes in cellular motility.

Product Description:

Full-length human SIRT2, containing an N-terminal GST tag, expressed in *E. coli.* and purified by GSH agarose chromatography.

Gene Information:

The gene accession number is NM_012237

Gene Aliases:

SIR2L2, SIR2L

Formulation:

Recombinant SIRT1 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 SIRT2 demonstrates approximately 78 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-1152 per minute at 20°C. Specific Activity will vary among production lots.

References:

1. North, BJ. and Verdin, E. Genome Biol. 5: 224, 2004
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3. Hubbert, C. et al. Nature 417: 455-458, 2002
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7. Smith, J. et al. Proc Natl Acad Sci U S A 97: 6658-6663, 2000
8. Vaziri, H. Cell. 107: 149-159, 2001
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10. Langley, E et al. EMBO J. 21: 2383-2396, 2002
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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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