

Active Recombinant Human SIRT3

Cat. No. SIRT3-341H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Source E.coli

Description

Sirtuins are phylogenetically conserved from bacteria to humans and regulate cell functions beyond silencing. The proteins show a relevance to cancer, obesity, muscle differentiation, inflammation and neuro-degeneration. In addition, Sirtuin activity may extend the lifespan of several organisms. Human Sirtuin 3 (Sirt3) is a mitochondrial member of Class III of the protein deacetylases family (historically called histone deacetylases family). Class III deacetylases utilize NAD⁺ as cosubstrate and act either as deacetylases or as ADP-ribosyltransferases. Sirt3 regulates mitochondrial function and thermogenesis; the enzyme can deacetylate and thereby activate the mitochondrial acetyl-CoA synthetase 2 which enables mitochondria to activate acetate for metabolic reactions. MW=32.2kDa (292 amino acids).

Form Purified recombinant protein in 20mM Tris-HCl pH7.8, and 150mM NaCl.

Activity >20units/μg 1 unit is defined as that amount of enzyme required to catalyze 1 pmol of product per minute at 37°C, 100μM Fluor de Lys-SIRT2 Substrate (Biomol) and 500μM NAD⁺.

Purity >90% by SDS-PAGE.

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Usage	For in vitro use only.
Storage	Quality guaranteed for 12 months, store at -80°C. Avoid freeze / thaw cycles.
GENE INFORMATION	
Gene Name	SIRT3 sirtuin (silent mating type information regulation 2 homolog) 3 (S. cerevisiae) [Homo sapiens]
Synonyms	SIRT3; sirtuin (silent mating type information regulation 2 homolog) 3 (S. cerevisiae); SIR2L3; NAD-dependent deacetylase sirtuin-3, mitochondrial; EC 3.5.1.-; SIR2-like protein 3; hSIRT3; mitochondrial nicotinamide adenine dinucleotide-dependent deacetylase 2; silent mating type information regulation 2, S.cerevisiae, homolog 3; sir2-like 3; sirtuin (silent mating type information regulation 2, S.cerevisiae, homolog) 3; sirtuin 3; sirtuin type 3
Gene ID	23410
mRNA Refseq	NM_001017524
Protein Refseq	NP_001017524
MIM	604481
UniProt ID	Q9NTG7
Chromosome Location	11p15.5
Function	NAD binding; NAD+ ADP-ribosyltransferase activity; hydrolase activity; hydrolase activity, acting on carbon-nitrogen (but not peptide) bonds, in linear amides; metal ion

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binding; protein binding; zinc ion binding

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