

Active Recombinant Human SIRT3

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

SPECIFICATION

Species	Human
Source	E.coli
Description	<p>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).</p>
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.
Usage	For in vitro use only.

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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 binding; protein binding; zinc ion binding

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