Recombinant Human SIRT1

Cat. No. SIRT1-30565TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant fragment: Human Sirtuin 1 , amino acids 193- 741,with an N-terminal enzyme tag.
Species	Human
Source	E.coli
ProteinLength	193-741 a.a.
Description	This gene encodes a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known to regulate epigenetic gene silencing and suppress recombination of rDNA. Studies suggest that the human sirtuins may function as intracellular regulatory proteins with mono-ADP-ribosyltransferase activity. The protein encoded by this gene is included in class I of the sirtuin family. Alternative splicing results in multiple transcript variants.
Tissue specificity	Widely expressed.
Biological activity	Specific Activity: 8 U/ug. One Unit =1 pmol/min, Assay condition: 25 mM Tris/Cl, pH8.0, 137 mM NaCl, 2.7 mM KCl, 1 mM MgCl2, and 0.1 mg/ml BSA, 30 uM BPS HDAC substrate, 200 uM NAD+ and 20 ng/ul Sirtuin 1. Incubation condition: 30 min at 30oC.

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Form	Liquid
Purity	>90% by SDS-PAGE
Storage buffer	Preservative: NoneConstituents: 0.05% Tween 20, 50mM Tris, 2.7mM Potassium chloride, 138mM Sodium chloride, pH 8.0
Storage	Aliquot and store at -80°C. Avoid repeated freeze / thaw cycles.
Sequence Similarities	Belongs to the sirtuin family.Contains 1 deacetylase sirtuin-type domain.

GENE INFORMATION

Gene Name	SIRT1 sirtuin 1 [Homo sapiens]
Official Symbol	SIRT1
Synonyms	SIRT1; sirtuin 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; SIR2L1;
Gene ID	23411
mRNA Refseq	NM_001142498
Protein Refseq	NP_001135970
MIM	604479
Uniprot ID	Q96EB6

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Chromosome Location	10q21
Pathway	E2F transcription factor network, organism-specific biosystem; Energy Metabolism, organism-specific biosystem; FoxO family signaling, organism-specific biosystem; HIF-2-alpha transcription factor network, organism-specific biosystem; Regulation of Androgen receptor activity, organism-specific biosystem;
Function	HLH domain binding; NOT NAD+ ADP-ribosyltransferase activity; NAD+ binding; NAD-dependent histone deacetylase activity; NAD-dependent histone deacetylase activity (H3-K9 specific);

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