

SIRT1 Protein, Human (555a.a, His)

Cat. No.:	HY-P73638
Synonyms:	75SirT1; hSIR2; hSIRT1; HST2; SIR2; SIR2 like 1; SIR2ALPHA; SIR2L1; Sirt1
Species:	Human
Source:	E. coli
Accession:	Q96EB6 (M193-S747)
Gene ID:	23411
Molecular Weight:	Approximately 62.8 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of PBS, pH 7.4, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>SIRT1, a NAD-dependent protein deacetylase, orchestrates the integration of various cellular functions, including cell cycle progression, response to DNA damage, metabolism, apoptosis, and autophagy, by modulating the acetylation status of numerous target proteins. Functioning as a sensor of the NAD(+)/NADH ratio, SIRT1 responds to changes in cellular energetics induced by factors such as glucose deprivation and caloric restriction. Its wide-ranging impact encompasses chromatin remodeling through histone deacetylation, ultimately leading to transcriptional regulation. SIRT1 engages in diverse interactions, deacetylating transcription factors, coregulators, and histones, thereby exerting both positive and negative regulation on target gene expression. Additionally, SIRT1 is implicated in critical processes such as DNA damage response, autophagy, circadian rhythm regulation, and metabolic homeostasis. Its multifaceted roles extend to the regulation of various cellular pathways and the maintenance of genomic integrity, highlighting its significance in cellular physiology and stress response.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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