SIRT3 Lysate – Tissue Lysate

PRODUCT OVERVIEW

Product Name	SIRT3, Lysate
Full Product Name	Human SIRT3 Protein Lysate
Product Gene Name	SIRT3 lysate
Product Synonym Names	SIRT3; SIR2L3; SIR2L3
Host	Human
Form/Format	Lyophilized
Preparation and Storage	Store at -20 degree C Once reconsituted, aliquot and store any remaining material at-20 degree C to avoid repeated freeze-thaw cycles.
Molecular Weight	28,567 Da
OMIM	604481
3D Structure	ModBase 3D Structure for Q9NTG7
Related Product Information for SIRT3 lysate	Human SIRT3 Protein Lysate 20ug is provided as a Lyophilized powder. This is a Recombinant Protein Lysate produced in HEK293T cells. This protein lysate can be reconsituted using SDS Sample Buffer.
Other Notes	Small volumes of SIRT3 lysate vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for SIRT3 purchase	MBS8419477 is a lysate targeting SIRT3. Also known as Human SIRT3 Protein Lysate. Host: Human.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SIRT3. It may not necessarily be applicable to this product.

NCBI GI #	6912660
NCBI GeneID	23410
NCBI Accession #	NP_036371
UniProt Primary Accession #	Q9NTG7
UniProt Secondary Accession #	Q9Y6E8; B7Z5U6
UniProt Related Accession #	Q9NTG7
GenBank Nucleotide #	NM_012239
NCBI Official Full Name	NAD-dependent protein deacetylase sirtuin-3, mitochondrial isoform a
NCBI Official Synonym Full Names	sirtuin 3
NCBI Official Symbol	SIRT3
NCBI Official Synonym Symbols	SIR2L3
UniProt Protein Name	NAD-dependent protein deacetylase sirtuin-3, mitochondrial
UniProt Synonym Protein Names	Regulatory protein SIR2 homolog 3; SIR2-like protein 3

Protein Family	NAD-dependent protein deacetylase sirtuin
UniProt Gene Name	SIRT3
UniProt Synonym Gene Names	SIR2L3; hSIRT3
UniProt Entry Name	SIR3_HUMAN
NCBI Protein Information	NAD-dependent protein deacetylase sirtuin-3, mitochondrial; sir2-like 3; sirtuin type 3; SIR2-like protein 3; regulatory protein SIR2 homolog 3; NAD-dependent deacetylase sirtuin-3, mitochondrial; silent mating type information regulation 2, S.cerevisiae
NCBI Summary for SIRT3	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. Two alternatively spliced transcript variants that encode different proteins have been described for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for SIRT3	SIRT3: a soluble mitochondrial NAD-dependent protein deacetylase. Can deacetylate and thereby activate a central metabolic regulator in the mitochondrial matrix, glutamate dehydrogenase. Mitochondrial proteins are hyperacetylated in SIRT3-deficient mice, but not in SIRT4 or SIRT5 deficient mice. SIRT3-deficient mice have no obvious metabolic phenotype, and the process of adaptive thermogenesis is normal. Can deacetylate and activate isocitrate dehydrogenase 2, an enzyme that participates in regulation of the citric acid cycle and the regeneration of antioxidants. Inhibited by nicotinamide, but not by trichostatin A. Its unprocessed form is enzymatically inactive. It is processed by mitochondrial processing peptidase (MPP) in the mitochondrial matrix to give an enzymatically active 28 kDa product. Protein type: Deacetylase; EC 3.5.1.-; Mitochondrial Chromosomal Location of Human Ortholog: 11p15.5 Cellular Component: mitochondrion; membrane; mitochondrial matrix Molecular Function: protein binding; enzyme binding; zinc ion binding; NAD-dependent histone deacetylase activity (H3-K14 specific); NAD+ ADP-ribosyltransferase activity Biological Process: mitochondrion organization and biogenesis; protein amino acid ADP-ribosylation; protein amino acid deacetylation; organelle organization and biogenesis; aerobic respiration; aging
Research Articles on SIRT3	**1.** In endothelial cells, SIRT3 stabilizes FOXO3 via deacetylation.
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