SIRT3 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	SIRT3, Polyclonal Antibody
Full Product Name	SIRT3 Antibody
Product Gene Name	anti-SIRT3 antibody
Product Synonym Names	NAD-dependent deacetylase sirtuin-3; mitochondrial; SIR2-like protein 3; hSIRT3; SIRT3
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Specificity	The antibody detects endogenous levels of total SIRT3 protein.
Preparation and Storage	Store at 4 degree C short term. Aliquot and store at -20 degree C long term. Avoid freeze/thaw cycles.
Molecular Weight	43,573 Da
Chromosome Location	Chromosome: 11; NC_000011.9 (215030..236362, complement). Location: 11p15.5
OMIM	604481
3D Structure	ModBase 3D Structure for Q9NTG7
Immunogen	Synthesized peptide derived from C-terminal of human SIRT3.
Product Categories/Family for anti-SIRT3 antibody	Primary Antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-SIRT3 antibody	Western Blot (WB)
Application Notes for anti-SIRT3 antibody	WB: 1:500~1:3000
Related Product Information for anti-SIRT3 antibody	NAD-dependent protein deacetylase. Activates or deactivates mitochondrial target proteins by deacetylating key lysine residues. Known targets include ACSS1, IDH, GDH, SOD2, PDHA1, LCAD, SDHA and the ATP synthase subunit ATP5O. Contributes to the regulation of the cellular energy metabolism. Important for regulating tissue-specific ATP levels.
Product References and Citations for anti-SIRT3 antibody	Bechtel S., BMC Genomics 8:399-399 (2007).Schwer B., J. Cell Biol. 158:647-657 (2002).Onyango P., Proc. Natl. Acad. Sci. U.S.A. 99:13653-13658 (2002)
Other Notes	Small volumes of anti-SIRT3 antibody 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	MBS8588765 is an antibody targeting SIRT3. Also known as SIRT3 Antibody. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

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

NCBI GI #	63054862
NCBI GeneID	23410
NCBI Accession #	NP_001017524.1
UniProt Primary Accession #	Q9NTG7
UniProt Secondary Accession #	Q9Y6E8; B7Z5U6
UniProt Related Accession #	Q9NTG7
GenBank Nucleotide #	NM_001017524.2
NCBI Official Full Name	NAD-dependent protein deacetylase sirtuin-3, mitochondrial isoform b
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.** SIRT3 is decreased in HCC and is a novel unfavorable marker for prognosis of patients with this fatal disease.
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