

## Immunotag™ SIRT1 mouse mAb

Antibody Specification	
Catalog No.	ITM1416
Product Description	Immunotag™ SIRT1 mouse mAb
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	SIRT1
Clonality	Monoclonal
Storage/Stability	-20°C/1 year
Application	WB,IP
Recommended Dilution	wb dilution 1:1000
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Mouse
Immunogen	Purified recombinant human SIRT1 protein fragments expressed in E.coli.
Specificity	This antibody detects endogenous levels of SIRT1 and does not cross-react with related proteins.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen
Form	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Gene Name	sirt1
Accession No.	Q96EB6 Q923E4

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Alternate Names	75SirT1;BA57G10.4;BA57G10.4;hSIR2;hSIRT1;HST2, <i>S. cerevisiae</i> , homolog of;NAD dependent deacetylase SIRT1;NAD dependent deacetylase sirtuin 1;NAD dependent protein deacetylase sirtuin 1;OTTHUMP00000198111;OTTHUMP00000198112;Regulatory protein SIR2 homolog 1;SIR1_HUMAN;SIR2 like 1;SIR2 like protein 1;SIR2, <i>S.cerevisiae</i> , homolog-like 1;SIR2-like protein 1;SIR2ALPHA;SIR2ALPHA;SIR2alpha protein;SIR2alpha protein;SIR2L1;SIRT 1;Sirt1;SIRT1 Sir2 like proteins (sirtuins) type 1;SIRT1: sirtuin (silent mating type information regulation 2 homolog) 1 ( <i>S. cerevisiae</i> );SIRT1: sirtuin (silent mating type information regulation 2 homolog) 1 ( <i>S. cerevisiae</i> );SirtT1 75 kDa fragment;sirtuin (silent mating type information regulation 2 homolog) 1 ( <i>S. cerevisiae</i> );Sirtuin 1; sirtuin;Sirtuin type 1;Sirtuin type 1.
Description	sirtuin 1(SIRT1) <i>Homo sapiens</i> 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. [provided by RefSeq, Dec 2008],
Protein Expression	Brain,Epithelium,Prostate,Testis,
Subcellular Localization	nuclear chromatin,nucleus,nuclear envelope,nuclear inner membrane,nucleoplasm,chromatin silencing complex,nuclear euchromatin,nuclear heterochromatin,nucleolus,cytoplasm,mitochondrion,PML body,rDNA heterochromatin,
Protein Function	catalytic activity:NAD(+) + an acetylprotein = nicotinamide + O-acetyl-ADP-ribose + a protein.,cofactor:Binds 1 zinc ion per subunit.,enzyme regulation:Inhibited by nicotinamide. Activated by resveratrol (3,5,4'-trihydroxy-trans-stilbene), butein (3,4,2',4'-tetrahydroxychalcone), piceatannol (3,5,3',4'-tetrahydroxy-trans-stilbene), Isoliquiritigenin (4,2',4'-trihydroxychalcone), fisetin (3,7,3',4'-tetrahydroxyflavone) and quercetin (3,5,7,3',4'-pentahydroxyflavone). RPS19BP1/AROS acts as a positive regulator of deacetylation activity.,function:NAD-dependent deacetylase, which regulates processes such as apoptosis and muscle differentiation by deacetylating key proteins. Deacetylates 'Lys-382' of p53/TP53 and impairs its ability to induce proapoptotic program and modulate cell senescence. Deacetylates TAF1B and thereby represses rDNA transcription by the RNA polymerase I. Involved in HES1- and HEY2-mediated transcriptional repression. Inhibits skeletal muscle differentiation by deacetylating PCAF and MYOD1. May serve as a sensor of the cytosolic ratio of NAD(+)/NADH, which is essential in skeletal muscle cell differentiation. Despite some ability to deacetylate histones in vitro, such activity is either weak or inexistent in vivo. In case of HIV-1 infection, interacts with and deacetylates the viral Tat protein.,miscellaneous:Red wine, which contains resveratrol, may participate in activation of sirtuin proteins, and may therefore participate in an extended lifespan as it has been observed in yeast.,similarity:Belongs to the sirtuin family.,similarity:Contains 1 deacetylase sirtuin-type domain.,subcellular location:Recruited to the nuclear bodies via its interaction with PML.,subunit:Interacts with TAF1B. Found in a complex with PCAF and MYOD1 (By similarity). Interacts with MLLT7/FOXO4, HES1, HEY2, p53/TP53 and PML. Interacts with RPS19BP1/AROS.,tissue specificity:Widely expressed.,

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Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.
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