

## Product datasheet for MR215307

### Sirt4 (NM\_001167691) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sirt4 (NM_001167691) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sirt4
Synonyms:	4930596O17Rik
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR215307 representing NM_001167691 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAGCGGATTGACTTTTCAGGCCGACAAAGGGCCGTTGGATCACCCACCTCAGCCGGCCGCTTCTGTG  
GACCCTCGGGGTTATTTGTGCCGCCAGCCCTCCTTTGGACCCTGAAAAGATCAAAGAGTTACAGCGCTT  
CATTAGCCTTTCCAAGAACTCCTCGTGATGACAGGCGCGGGATCTCCACCGAGTCCGGCATCCAGAG  
TACAGGTCAGAAAAGGTGGGACTTTACGCCCGCACTGACCGGAGACCCATCCAGCACATTGATTTCTGTC  
GCAGTGTCCGGTCCGCCAGCGTACTGGGCCGAACTTTGTGGCTGGCCTCAATTCTCTCTACCA  
ACCCAACCCAGCACACTGGGCTCTGAGCAACTGGGAGAGACTGGGGAAGCTGCACTGGTTGGTGACTCAG  
AACGTGGACGCTTTGCACTCAAAGCAGGGAGTCAGCGGCTGACGGAGCTCCACGGATGCATGCACAGAG  
TCCTGTGCCTGAACTGTGGGGAGCAGACTGCCCGCAGGGTGTGCAGGAACGCTTCCAAGCCCTGAACCC  
CAGCTGGAGCGCCGAGGCGCAGGGCGTGGCTCCCGACGGCGACGTGTTCTCACTGAGGAGCAGGTCCGG  
AGCTTTCAGGTCCCGTGTGATCGATGCGGCGGCCCTGAAACCGGACGTCGTTTTCTTTGGGGACA  
CGGTGAACCCAGACAAGGTTGACTTTGTGACCCGGCGTGTAAAGAGCGGACTCCCTACTGGTGGTGGG  
ATCATCCCTGCAGGTGTACTCTGGTTACAGGTTTCATCCTACCGCCCGCAGCAAAGCTCCCAATAGCC  
ATTCTGAATATCGGCCCCACCCGGTCTGACGATTTGGCTTGCTGAAGCTGGATTCCCGCTGTGGAGAGT  
TGCTGCCTTTAATAGACCCGCGGAGACGACTCTGATGTCCAAGGCTGGAAATGAACCTTCTCTGAG  
TCCGCTGCTCAAGATCCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR215307 representing NM\_001167691  
Red=Cloning site Green=Tags(s)

MSGLTFRPTKGRWITHLSRPRSCGPSGLFVPPSPPLDPEKIKELQRFISLSKLLVMTGAGISTESGIPD  
 YRSEKVGLYARTDRRPIQHIDFVRSAPVRQRYWARNFVGWPQFSSHQPNAHWALSNWERLGKHLHWLVTQ  
 NVDALHSKAGSQRLTELHGCMHRVLC LNCGEQTARRVLQERFQALNPSSWSAEAQGVAPDGDVFLTEEQVR  
 SFQVPCDCRCGGPLKPDVVFFGDTVNPDKVDFVHRRVKEADSLLVGSSLQVYSGYRFLTAREQKLPIA  
 ILNIGPTRSDDLACLKLD SRCGELLPLIDPRRQHSQVRLQLEMNFLSSAAQDP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1323\\_b01.zip](https://cdn.origene.com/chromatograms/ja1323_b01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001167691

**ORF Size:** 999 bp

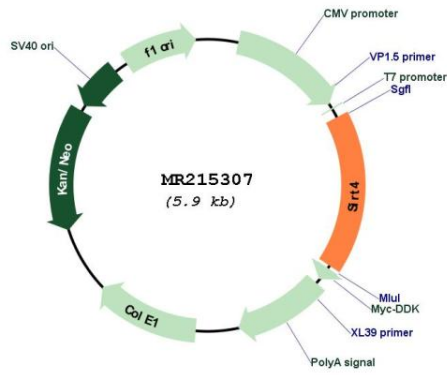
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>RefSeq:</b>	<u>NM_001167691.1, NP_001161163.1</u>
<b>RefSeq Size:</b>	1645 bp
<b>RefSeq ORF:</b>	1002 bp
<b>Locus ID:</b>	75387
<b>UniProt ID:</b>	<u>Q8R216</u>
<b>Cytogenetics:</b>	5 F
<b>MW:</b>	38 kDa
<b>Gene Summary:</b>	<p>Acts as NAD-dependent protein lipoamidase, ADP-ribosyl transferase and deacetylase (PubMed:19220062). Catalyzes more efficiently removal of lipoyl- and biotinyl- than acetyl-lysine modifications. Inhibits the pyruvate dehydrogenase complex (PDH) activity via the enzymatic hydrolysis of the lipoamide cofactor from the E2 component, DLAT, in a phosphorylation-independent manner (PubMed:25525879). Catalyzes the transfer of ADP-ribosyl groups onto target proteins, including mitochondrial GLUD1, inhibiting GLUD1 enzyme activity. Acts as a negative regulator of mitochondrial glutamine metabolism by mediating mono ADP-ribosylation of GLUD1: expressed in response to DNA damage and negatively regulates anaplerosis by inhibiting GLUD1, leading to block metabolism of glutamine into tricarboxylic acid cycle and promoting cell cycle arrest (PubMed:16959573). In response to mTORC1 signal, SIRT4 expression is repressed, promoting anaplerosis and cell proliferation (PubMed:23663782). Acts as a tumor suppressor (PubMed:23562301, PubMed:23663782). Also acts as a NAD-dependent protein deacetylase: mediates deacetylation of 'Lys-471' of MLYCD, inhibiting its activity, thereby acting as a regulator of lipid homeostasis (PubMed:23746352). Does not seem to deacetylate PC (PubMed:23438705). Controls fatty acid oxidation by inhibiting PPARA transcriptional activation. Impairs SIRT1:PPARA interaction probably through the regulation of NAD(+) levels (PubMed:24043310, PubMed:20685656). Down-regulates insulin secretion (By similarity).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR215307