

Product datasheet for MR204397

Sirt5 (NM_178848) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sirt5 (NM_178848) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sirt5
Synonyms:	0610012J09Rik; 1500032M05Rik; AV001953
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR204397 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCGACCTCCTGATTGCTCCGGCCGATTCAATTTCCAGTTGTGTTGTAGACGAAAGCCTCCTGCCT
CCCCACAAAGCAAGATCTGCCTCACCATGGCTCGTCCAAGTTCAAATATGGCAGACTTTCGGAAGTGTTT
TGCGAACGCCAAGCACATAGCCATCATCTCGGGGGCTGGCGTTAGTGCAGAGAGTGGGGTCCCACCTTC
AGAGGCGCTGGAGTTACTGGAGAAAATGGCAGGCTCAGGACCTGGCAACCCCTCAGGCCTTTGCTCGAA
ACCCATCACAGGTGTGGGAGTTTTACCACTACCGAGGGAGGTATGCGGAGCAAAGAACCAACCCCGG
GCACCTGGCCATTGCCAGTGTGAAGCCCGCTTCGTGACCAGGGCAGACGGGTTGTGGTATCACCCAG
AACATCGACGAGTTGCATCGCAAGGCTGGCACCAAGAACCTTCTGGAAATCCACGGAACCTTATTTAAAA
CTCGGTGTACCTCGTGTGGCACCCTTGGCAGAACTATAGGAGTCCGATCTGCCAGCTTTAGCAGGAAA
AGGGGCCCCAGAGCCAGAGACTCAAGACGCCAGAAATCCCAGTCGACAAACTTCCCCTGGCAGGAGGCA
GGATGCGGAGGCTTGCTGCGACCTCACGTGGTGTGTTTGGAGAAAACCTAGATCCTGCCATTCTGGAGG
AGGTGGACAGAGAGCTTGCCCTCTGTGACCTGTGTCTAGTGGTGGGAACATCCTCTGTGGTCTACCCGGC
TGCCATGTTTGCCCTCAGGTGGCTTCCAGGGGAGTCCCCTGGCCGAGTTTAAACATGGAGACCACCCCA
GCCACCGACAGATTCAGGTTTCATTTTCCCGACCCTGTGGGAAAACCTTCTCTGAAGCCCTTGCTCCTC
ATGAAACTGAAAGGACTTCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR204397 protein sequence
 Red=Cloning site Green=Tags(s)

MRPLLIAPGRFISQLCCRRKPPASPQSKICLTMARPSSNMADFRKCFANAKHIAIISGAGVSAESGVPTF
 RGAGGYWRKWQAQDLATPQAFARNPSQVWEFYHYRREVMRSKEPNPGLAIAQCEARLRDQGRVVITQ
 NIDELHRKAGTKNLLEIHGTLFKTRCTSCGTVAENYRSPICPALAGKGAPEPETQDARIPVDKLPCEEA
 GCGGLLRPHVVWFGENLDPAILLEEVDRELALCDLCLVVGTSVVVYPAAMFAPQVASRGPVVAEFNMETTP
 ATDRFRHFPGPCGKTLPEALAPHETERTS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_178848

ORF Size: 933 bp

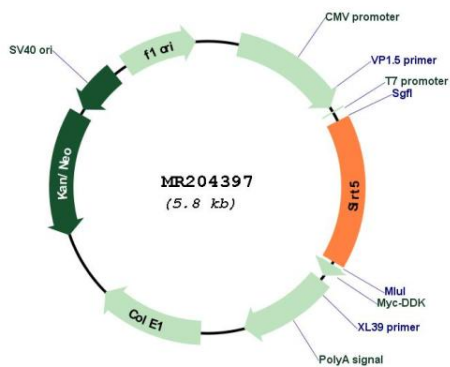
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.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.
RefSeq:	<u>NM_178848.2</u>
RefSeq Size:	1369 bp
RefSeq ORF:	933 bp
Locus ID:	68346
UniProt ID:	<u>Q8K2C6</u>
Cytogenetics:	13 A4
MW:	34.1 kDa
Gene Summary:	NAD-dependent lysine demalonylase, desuccinylase and deglutarylase that specifically removes malonyl, succinyl and glutaryl groups on target proteins (PubMed:23806337, PubMed:21908771, PubMed:22076378, PubMed:24315375, PubMed:24703693). Activates CPS1 and contributes to the regulation of blood ammonia levels during prolonged fasting: acts by mediating desuccinylation and deglutarylation of CPS1, thereby increasing CPS1 activity in response to elevated NAD levels during fasting (PubMed:19410549, PubMed:24703693). Activates SOD1 by mediating its desuccinylation, leading to reduced reactive oxygen species (By similarity). Activates SHMT2 by mediating its desuccinylation (By similarity). Modulates ketogenesis through the desuccinylation and activation of HMGCS2 (PubMed:24315375). Has weak NAD-dependent protein deacetylase activity; however this activity may not be physiologically relevant in vivo. Can deacetylate cytochrome c (CYCS) and a number of other proteins in vitro such as Uox (PubMed:23085393).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR204397