

Product datasheet for **RR202333**

Sirt5 (NM_001004256) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Sirt5 (NM_001004256) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Sirt5
Synonyms: MGC93823
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR202333 representing NM_001004256
Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**

ATGCGACCGCTCCCGGTGCTCCCGACGCTCTTCTCCAGCTGTGTTGTGGACCGAAGCCTTCAGCCT
CCCCACAGAGCAAGATCTGCCTCACCATGGCTCGTCCAAGTTCCAATATGGCAGATTTTCGGAAGTGTTT
TGCGAACGCAAGCACATAGTCATCATCTCGGGGCTGGTGTAGTGGGAGAGTGGGGTTCCAACATTC
AGAGGAACCGGAGGCTATTGGAGAAAATGGCAAGCTCAGCACCTGGCGACTCCTCTGGCCTTTGCTCACA
ACCCCTCACAGGTGTGGGAGTTTACCACTACCGGAGGGAGGTGTCGCGAACAAGGAACCAACCTTGG
GCACCTGGCCATTGCCAATGTGAAGCCCGGCTGCGTGACCGAGGCGAGCGGTTGTGGTCATACCCAG
AACATTGATGAGTTACATCGAAAGGCTGGCACCAAGAAGCTGCTGGAAATCCACGGAACCTTATTTAAA
CTCGGTGTACCTCGTGTGGCAATGTTGCTGAGAACTACAAGAGTCCGATTTGTCCAGCCTTATTGGGAAA
AGGGGCCCCAGAACAGATACTCAAGAGTCCAGAATCCAGTCCACAACTTCCCGGTGCGAGGAGGCA
GGATGTGGAGGCTTGTGCGACCTCACGTGGTGTGGTTTGGAGAAAACCTGGATCCTGCCATTCTGAAAG
AGGTGGACAGAGAGCTCGCCGCTGTGACCTGTGTCTAGTGGTGGGAACGTCCTCTGTGGTCTACCCAGC
TGCCATGTTTGCCCTCAGGTGGCTTCCAGGGGGGTCCCGGTGGCCGAGTTTAACATGGAACCAACCCCA
GCCACCAACAGATTACAGTTTTCATTTTCCCGGACCCTGTGGAGTAACCTCTCCTGAAGCCCTTGCTCCCC
ATGAAACTGAAAGGATTCTATGAACTGAAAGGATTCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RR202333 representing NM_001004256

Red=Cloning site Green=Tags(s)

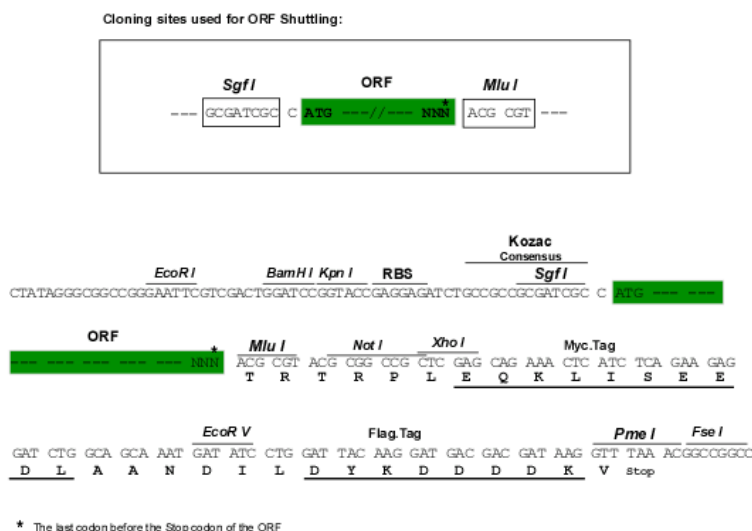
MRPLPVAPGR LFSQLCCGPKPSASPQSKICLTARPSSNMADFRKCFANAKHIVIISGAGVSAESGVPTF
RGTGGYWRKWQAQHLATPLAFAHNPSQVWEFYHYRREVMRNKEPNPGLAIAQCEARLRDQGRVVITQ
NIDELHRKAGTKNLLEIHGTLFKTRCTSCGNVAENYKSPICALLGKGAPEPDTQESRIPVHKLPRCEEA
GCGGLLRPHVVWFGENLDPAILKEVDRELARCDLCLVGTSSVVYPAMFAPQVASRGVPVAEFNMETTP
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

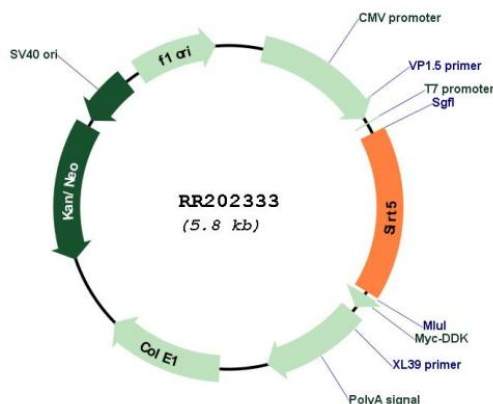
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001004256

ORF Size: 930 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).
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 Size:	1370 bp
RefSeq ORF:	933 bp
Locus ID:	306840
UniProt ID:	Q68FX9
Cytogenetics:	17p12
MW:	34.1 kDa
Gene Summary:	NAD-dependent lysine demalonylase, desuccinylase and deglutarylase that specifically removes malonyl, succinyl and glutaryl groups on target proteins. 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. Activates SOD1 by mediating its desuccinylation, leading to reduced reactive oxygen species. Activates SHMT2 by mediating its desuccinylation. Modulates ketogenesis through the desuccinylation and activation of HMGCS2. 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.[UniProtKB/Swiss-Prot Function]