

Product datasheet for **MG227015**

Sirt3 (NM_022433) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sirt3 (NM_022433) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sirt3
Synonyms:	2310003L23Rik; AI848213; Sir2I3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG227015 representing NM_022433 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGTGGGGCCGGCATCAGCACACCCAGTGGCATCCCGGACTTCAGATCCCCAGGGAGCGGCTCTACAGCAACCTTCAGCAGTATGACATCCCGTACCCTGAAGCCATCTTTGAACTTGGCTTTTTCTTTCACAACCCCAAGCCCTTTTCATGTTGGCCAAGGAGCTGTACCCTGGGCACTACAGGCCCAATGTCACCTACTACTCTGAGGCTCCTCCACGACAAGGAGCTGCTTCTGCGGCTCTATACACAGAACATCGACGGGCTTGAGAGAGCATCTGGGATCCCTGCCTCAAAGCTGGTTGAAGCCACGGGACCTTTGTAAACAGTACATGCACGGTCTGTGGAAGGTCCTCCAGGGGAAGACATATGGGCTGATGTGATGGCGGACAGGGTGCCCCGCTGCCCTGCTGTACTGGCGTTGTGAAACCCGACATTGTGTTCTTTGGGAGCAGCTGCCTGCAAGGTTCTACTCCATATGGCTGACTTCGCTTTGGCAGATCTGCTACTCATTCTTGGGACCTCCCTGGAGGTGGAGCCTTTTGCCAGCTTGCTGAAGCAGTACAGAAATCAGTGCCCGACTGCTCATCAATCGAGACTTGGTGGGGCCGTTTCGTTCTGAGTCTCGAAGGAAAGATGTGGTCCAGCTAGGGGATGTAGTTCATGGTGTGGAAGGCTGGTGGACCTCTGGGGTGGACACAAGAAGCTGCTGGATCTTATGCAGCGGGAACGTGGCAAGCTGGATGGACAGGACAGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG227015 representing NM_022433
 Red=Cloning site Green=Tags(s)

MVGAGISTPSGIPDFRSPGSLYSNLQQYDIPYEAIFELGFFFHNPKPFMLAKELYPGHYRPNVTHYF
 LRLLDKELLLRLYTQNIIDGLERASGIPASKLVEAHGTFVTATCTVCRRSFPGEDIWADVMADRVPRCPV
 CTGVVVPDIVFFGEQLPARFLLHMADFALADLLLILGTSLEVEPFASLSEAVQKSVPRLLINRDLVGPFFV
 LSPRRKDVVQLGDVVHGVRLVDLLGWTQELLDLMQRERGLDQGDR

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_022433

ORF Size: 771 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:

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: [NM_022433.2](#), [NP_071878.2](#)

RefSeq Size: 1484 bp

RefSeq ORF: 774 bp

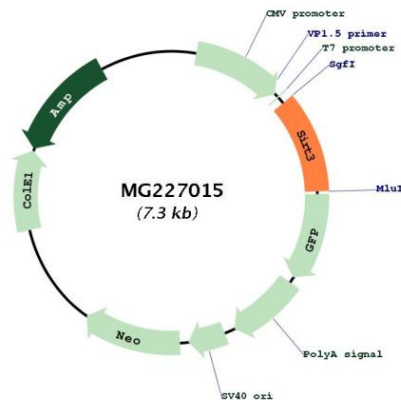
Locus ID: 64384

UniProt ID: [Q8R104](#)

Cytogenetics: 7 F4-F5

Gene Summary: NAD-dependent protein deacetylase (PubMed:23835326, PubMed:17923681, PubMed:18794531, PubMed:21172655). Activates or deactivates mitochondrial target proteins by deacetylating key lysine residues (PubMed:23835326, PubMed:17923681, PubMed:18794531, PubMed:21172655). Known targets include ACSS1, IDH, GDH, PDHA1, SOD2, LCAD, SDHA and the ATP synthase subunit ATP5PO (PubMed:16790548, PubMed:18794531, PubMed:21172655). Contributes to the regulation of the cellular energy metabolism (PubMed:23835326). Important for regulating tissue-specific ATP levels (PubMed:18794531, PubMed:24252090). In response to metabolic stress, deacetylates transcription factor FOXO3 and recruits FOXO3 and mitochondrial RNA polymerase POLRMT to mtDNA to promote mtDNA transcription (PubMed:23283301).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG227015