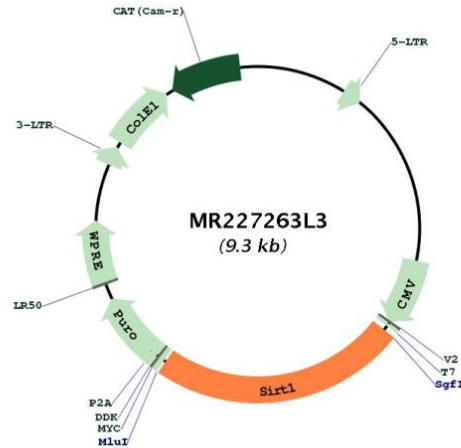


Plasmid Map:



ACCN: NM_019812

ORF Size: 2211 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:

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_019812.2](#)

RefSeq Size: 3920 bp

RefSeq ORF: 2214 bp

Locus ID: 93759

UniProt ID: [Q923E4](#)

Cytogenetics: 10 B4

Gene Summary: This gene encodes a member of the sirtuin family of proteins, characterized by their deacetylase activity and proposed role in longevity. The encoded protein regulates gene expression in a wide range of cell and tissue types through its NAD⁺-dependent deacetylation of histones, transcription factors and transcriptional coactivators. Brain-specific overexpression of this gene has been shown to result in increased median lifespan. Viability of homozygous knockout mice for this gene varies with strain background. Homozygous knockout mice of strains that do not exhibit embryonic lethality are sterile and have a reduced lifespan. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2015]