

Product datasheet for **RG200619**

Spermine synthase (SMS) (NM_004595) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Spermine synthase (SMS) (NM_004595) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Spermine synthase
Synonyms:	MRSR; SPMSY; SpS; SRS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG200619 representing NM_004595 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCAGCAGCACGGCACAGCAGCTCGACTTCATGCTCGGCGCCAAAGCTGATGGTGAGACCATTCTAA
AAGGCCTCCAGTCCATTTCCAGGAGCAGGGGATGGCGGAGTCGGTGCACACCTGGCAGGACCATGGCTA
TTTAGCAACCTACACAAACAAGAACGGCAGCTTTGCCAATTTGAGAATTTACCCACATGGATTGGTGTG
CTGGACCTTCAGAGTTATGATGGTATGCGCAAGGCAAAGAAGAGATCGACAGTATTTGAACAAAGTAG
AGGAAAGAATGAAAGAATTGAGTCAGGACAGTACTGGGCGGGTGAACGATTACCACCCATAGTGCAGG
AGGAGCCATCGACAGATACTGGCCACC GCCGACGGGCGCCTGGTTGAATATGACATAGATGAAGTGGTA
TATGACGAAGATTCACCTTATCAAAATATAAAAATTCTACACTCGAAGCAGTTTGGAAATATTCTCATCC
TTAGTGGGGATGTTAATTTGGCAGAGAGTGATTTGGCATATACCCGGGCCATCATGGGCAGTGGCAAAGA
AGATTACACTGGCAAAGATGTA CTACTTCTGGGAGGTGGAGACGGAGGCATATTGTGTGAAATAGTCAA
CTAAAACCAAAGATGGTCACTATGGTAGAGATTGACCAAATGGTATTGATGGGTGAAGAAATACATGC
GAAAAACGTGTGGCGATGTCTTAGACAATCTTAAAGGAGACTGCTATCAGGTTCTAATAGAAGACTGTAT
CCCGGTACTGAAGAGGTACGCCAAAGAAGGGAGAGAATTTGATTATGTGATTAATGATTTGACAGCTGTT
CCAATCTCCACGTCTCCAGAAGAAGATTCACATGGGAGTTTCTCAGACTGATTCTTGACCTCTCAATGA
AAGTGTTGAAACAGGATGGGAAATATTTTACACAGGGGAACTGTGCAATCTGACAGAAGCACTGTCGCT
CTATGAAGAACAGCTGGGCGCCTGTATTGTCTGTGGAATTTTCAAAGGAGATCGTCTGTGTCCCTTCA
TACTTGAATTTGGGTATTTTACTGTTTGAAGAAAGCTAAACCC

ACCGGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG200619 representing NM_004595
 Red=Cloning site Green=Tags(s)

MAAARHSTLDFMLGAKADGETILKGLQSFQEQQMAESVHTWQDHGYLATYTNKNGSFANLRIYPHGLVL
 LDLQSYDGDAAQGGKEEIDSILNKVEERMKELSQDSTGRVKRLPPIVRGGAIDRYWPTADGRLVEYDIDEVV
 YDEDSPYQNIKILHSKQFGNIIILSGDVNLAESDLAYTRAIMSGKEDYTGKDVILGGGDGGILCEIVK
 LKPKMVTMVEIDQMVIDGCKKYMRKTCGDVLDNLKGDCYQVLIEDCIPVLKRYAKEGREFDYVINDLTAV
 PISTSPPEEDSTWEFLRLILDLSMKVYKQDGKYFTQGNVCNLTALSLYEEQLGRLYCPVEFSKEIVCVPS
 YLELWVFYTVWKKAKP

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004595

ORF Size: 1098 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_004595.5](#)

RefSeq Size: 1717 bp

RefSeq ORF: 1101 bp

Locus ID: 6611

UniProt ID: [P52788](#)

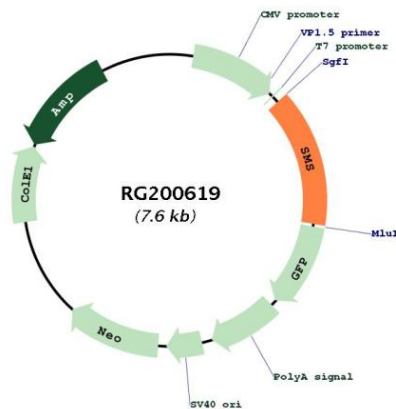
Cytogenetics: Xp22.11

Domains: Spermine_synth

Protein Pathways: Arginine and proline metabolism, beta-Alanine metabolism, Cysteine and methionine metabolism, Glutathione metabolism, Metabolic pathways

Gene Summary: This gene encodes a protein belonging to the spermidine/spermin synthase family and catalyzes the production of spermine from spermidine. Pseudogenes of this gene are located on chromosomes 1, 5, 6 and X. Mutations in this gene cause an X-linked intellectual disability called Snyder-Robinson Syndrome (SRS). Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2017]

Product images:



Circular map for RG200619