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Product datasheet for RC200619

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:	Myc-DDK
Symbol:	Spermine synthase
Synonyms:	MRSR; SPMSY; SpS; SRS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC200619 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAGCAGCACGGCACAGCACGCTCGACTTCATGCTCGGCGCCAAAGCTGATGGTGAGACCATTCTAA
AAGGCCTCCAGTCCATTTTCCAGGAGCAGGGGATGGCGGAGTCGGTGCACACCTGGCAGGACCATGGCTA
TTTAGCAACCTACACAAACAAGAACGGCAGCTTTGCCAATTTGAGAATTTACCCACATGGATTGGTGTTG
CTGGACCTTCAGAGTTATGATGGTGATGCGCAAGGCAAAGAAGAGATCGACAGTATTTTGAACAAAGTAG
AGGAAAGAATGAAAGAATTGAGTCAGGACAGTACTGGGCGGGTGAAACGATTACCACCCATAGTGCGAGG
AGGAGCCATCGACAGATACTGGCCCACCGCCGACGGGCGCCTGGTTGAATATGACATAGATGAAGTGGTA
TATGACGAAGATTCACCTTATCAAAATATAAAAATTCTACACTCGAAGCAGTTTGGAAATATTCTCATCC
TTAGTGGGGATGTTAATTTGGCAGAGAGTGATTTGGCATATACCCGGGCCATCATGGGCAGTGGCAAAGA
AGATTACACTGGCAAAGATGTACTCATTCTGGGAGGTGGAGACGGAGGCATATTGTGTGAAATAGTCAAA
CTAAAACCAAAGATGGTCACTATGGTAGAGATTGACCAAATGGTGATTGATGGGTGTAAGAAATACATGC
GAAAAACGTGTGGCGATGTCTTAGACAATCTTAAAGGAGACTGCTATCAGGTTCTAATAGAAGACTGTAT
CCCGGTACTGAAGAGGTACGCCAAAGAAGGGAGAGAATTTGATTATGTGATTAATGATTTGACAGCTGTT
CCAATCTCCACGTCTCCAGAAGAAGATTCCACATGGGAGTTTCTCAGACTGATTCTTGACCTCTCAATGA
AAGTGTTGAAACAGGATGGGAAATATTTTACACAGGGGAACTGTGTCAATCTGACAGAAGCACTGTCGCT
CTATGAAGAACAGCTGGGGCGCCTGTATTGTCCTGTGGAATTTTCAAAGGAGATCGTCTGTGTCCCTTCA
TACTTGGAATTGTGGGTATTTTACACTGTTTGGAAGAAAGCTAAACCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC200619 protein sequence
Red=Cloning site Green=Tags(s)

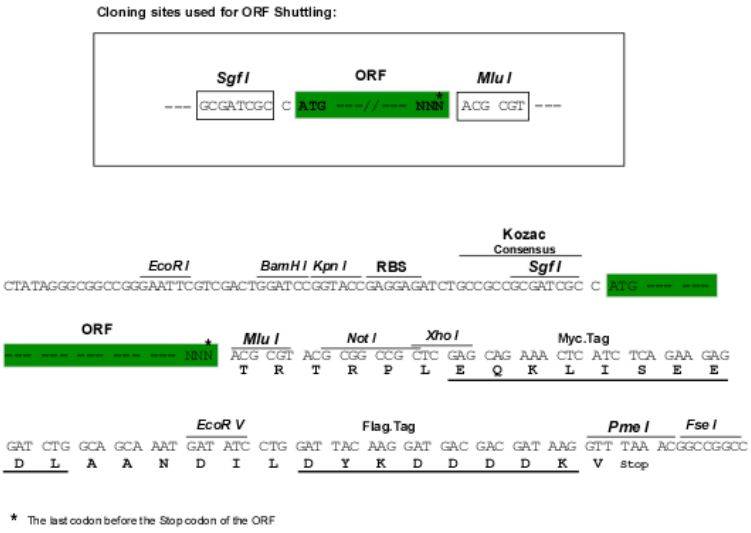
MAAARHSTLDFMLGAKADGETILKGLQSIFQEQGMAESVHTWQDHGYLATYTNKNGSFANLRIYPHGLVL
LDLQSYDGDAQGKEEIDSILNKVEERMKELSQDSTGRVKRLPPIVRGGAIDRYWPTADGRLVEYDIDEVV
YDEDSPYQNIKILHSKQFGNILILSGDVNLAESDLAYTRAIMGSGKEDYTGKDVLILGGGDGGILCEIVK
LKPKMVTMVEIDQMVIDGCKKYMRKTCGDVLDNLKGDCYQVLIEDCIPVLKRYAKEGREFDYVINDLTAV
PISTSPEEDSTWEFLRLILDLSMKVLKQDGKYFTQGNCVNLTEALSLYEEQLGRLYCPVEFSKEIVCVPS
YLELWVFYTVWKKAKP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6418_b04.zip

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).

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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: 1868 bp

RefSeq ORF: 1101 bp

Locus ID: 6611

UniProt ID: P52788

Cytogenetics: Xp22.11

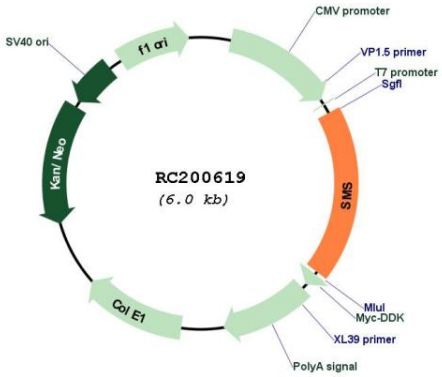
Domains: Spermine_synth

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

MW: 41.3 kDa

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 RC200619

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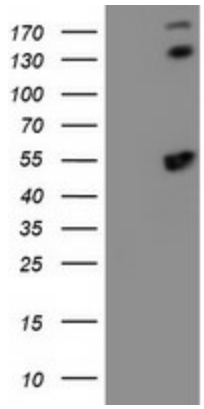
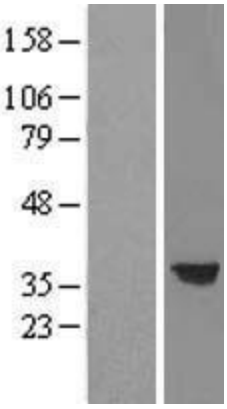
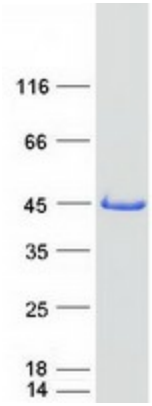


HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SMS (Cat# RC200619, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SMS(Cat# [TA503099]). Positive lysates [LY417877] (100ug) and [LC417877] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417877]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200619 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SMS protein (Cat# [TP300619]). The protein was produced from HEK293T cells transfected with SMS cDNA clone (Cat# RC200619) using MegaTran 2.0 (Cat# [TT210002]).

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