

Product datasheet for **MR209795**

Smpd3 (NM_021491) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smpd3 (NM_021491) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smpd3
Synonyms:	4631433G07Rik; AI427456; AW537966; fro; nSMase2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>MR209795 representing NM_021491
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGTTTTGTACACGACCCCTTTCCTAATAGCTGTCTGTCTGCCCTCCACGCCGTGCCTGGGCCCTCA
TCTTCCCATGTTACTGGCTGGTGGACCGCTGTTGGCCTTTTCATACCCACCACCTATGAGAAGCGCCA
GAGGGCAGATGACCCCTGCTGCCTGCAGCTGTTCTGCACGGTCTCTTACGCCAGTCTACCTGGCTCTG
CTTGTTGGCTGCACTGCCCTTTCCTTTCTCGGGTTCATCTTCTGGTCTCCACTGCAGTCTGCCCGCCGGC
CCTACTCTACTCCCGCTAGAAGACAAGAACCAGCTGGTGGGCAGCCCTGCTTAGTGAATGGAAGGG
CACGGGGCAGGCAAAAGCTTTTCTCGCCACGGCCAATGTCTGCCTCTCCCGACTCACTCGCGAGG
CTCAATAATGTGTTCAACACTCAAGCTCGGGCCAAAGAGATTGGGCAGAGAATCCGCAATGGGGCCGCCA
GGCCTCAGATCAAGATCTACATCGATTCTCCACCAACACCTCCATCAGTGCAGCCAGCTTCAGCAGCCT
GGTGTCCGCACAGGGTGGTGGATCCAGAGCTTCTCTGGGAGCATTAAAGAGGACAGCCTCTGTGGAA
TACAAGGGGGATGGTGGGCGTCACCCACAGCAGAGGCTGCCAACGGCCAGCCTCTGGAGAACAGGCTG
ACGGAAGCCTTGAGGACAGCTGCATTGTGCGAATTGGTGGCGAGGAAGGAGGTCGGCCACAGAAGCTGA
TGACCCTGCTGCCGGGAGCCAAGCCAGGAATGGGGCTGGTGGGACCCCAAGGGCCAGACACCCAACCAC
AATCAGCGAGATGGGGATTCTGGGAGCCTGGGCAGCCCTCAGCCTCCAGGGAGTCTTGGTGAAGGCAC
GGGCTGGGCAAGCAGTGGTGGCAGCGGAGAGCCAGGGGCTAACAGCAAGCTGCTGTATAAGACCTCTGT
GGTGAAGAAGGCAGCAGCCCGCAGGAGGGCCACCCTGATGAAGCCTTTGACCAGAGGTCTCAGCCTTC
TCCCGGCCAATCTGGACTTCTGTGCCTGCAGGAGGTGTTTACAAGCGTGGGCTGCTAAGTTGAAAG
AGCAGCTACACGGCTACTTCGAGTACATCCTGTATGATGTTGGGGTCTACGGTTGCATGGTTGCTGCAA
TTTCAAATGTCTCAACAGCGGTCTCTTCTCGCCAGCCGCTACCCTGTCATGGAGCTGGCCTATCACTGT
TACCCCAATGGGTGCAGTTCGATGCCCTGGCCTTAAGGGAGCTCTGTTTCTCAAGGTGCAGGTGGGAA
GCACACCTCAGGACCAAGAATTGTTGGGTACATCGCCTGCACACACCTGCATGCCCCACCAGAGGACAG
TGCCGTCCGGTGTGAGCAGCTGGACCTGCTTCAGGACTGGCTGGCTGATTTCCGAAAATCTACCTCTCG
ACCAGCACAGCCAACCCCGAGGAGCTGGTGGTGTGTTGACGTCTCTGTGGAGATTTGAACCTTGATAACT
GCTCTTCTGATGACAACTGGAGCAGCAGCACTCGCTTTACTCGCTACAAAGACCCCTGCCGCTTGG
GCCCGGGGAGGAGAAGCCTTGGGCCATTGGCACCTGCTGGACACAAACGGTCTCTATGATGAGGATGTG
TGTACCCCGGACAACCTTCAAAGGTGTTGGAGAGCGAGGAAGGCCGAGGGAGTATCTGGCCTTCCCA
CCAGCAAGAGCCAGGTGCTGGGCAGAAGGGCCGGAAGGATCTGCTGAAGGGCAATGGCCGCCGATCGA
CTACATGCTGCACGCCGAGGAGGGGCTGTGCCCTGACTGGAAGGCTGAGGTAGAAGAATTCAGTTTTATC
ACCCAGCTGTCCGGCCTGACCGACCACCTCCCCGTGGCCATGCGGCTGATGGTGTCTGCAGGGGAAGAGG
AGGCA

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR209795 representing NM_021491
 Red=Cloning site Green=Tags(s)

MVLYTTPFPNSCLSALHAVSWALIFPCYWLVDRLASFIPTTYEKQRADDPCCQLFCTVLFTPVYLAL
 LVAALPFAFLGFIFWSPLQSARRPYSYSRLEDKNPAGGAALLSEWKGTGAGKSFCFATANVCLLPDSLAR
 LNNVNTQARAKEIGQRIRNGAARPQIKIYIDSPTNTSISAASFSSLVSPQGGDGSRAVPGSIKRTASVE
 YKGDGGRHPSDEAANGPASGEQADGSLEDSCIVRIGGEEGRPQEADDPAAAGSQARNAGAGGTPKQQT
 PNH NQRDGDGSLGSPASRESLVKARAGQDSGGSGEPGANSKLLYKTSVVKKAARRRRHPDEAFDHEVSAF
 FPANLDFLCLQEVFDKRAAAKLKEQLHGYFEYILYDVGVYGHGCCNFKCLNSGLFFASRYPMVDVAYHC
 YPNGCSFDALASKGALFLKVQVGSTPQDQRIYVYIACHTLHAPPEDSAVRCEQLDLLQDWLADFRKSTSS
 TSTANPEELVVFVVICGDLNFDNCSSDDKLEQQHSLFTRYKDPCLGPGEKPWAIGTLLDTNGLYDEDV
 CTPDNLQKVLSEEGREYLAFTSKSPGAGQKGRKDLLKGNRRIDYMLHAEGLCPDWKAEVEEFSFI
 TQLSGLTDHLPVAMRLMVSAGEEEA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9014_b05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_021491

ORF Size: 1965 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_021491.4](#)

RefSeq Size: 5148 bp

RefSeq ORF: 1968 bp

Locus ID: 58994

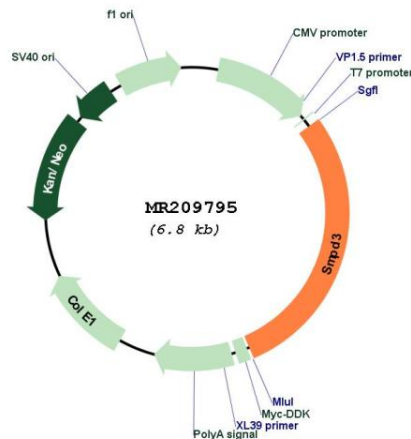
UniProt ID: [Q9JY3](#)

Cytogenetics: 8 D3

MW: 71.6 kDa

Gene Summary: Catalyzes the hydrolysis of sphingomyelin to form ceramide and phosphocholine. Ceramide mediates numerous cellular functions, such as apoptosis and growth arrest, and is capable of regulating these 2 cellular events independently. Also hydrolyzes sphingosylphosphocholine. Regulates the cell cycle by acting as a growth suppressor in confluent cells. Acts as a regulator of postnatal development and participates in bone and dentin mineralization. Overexpression enhances cell death, suggesting that it may be involved in apoptosis control. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209795