

Product datasheet for **RC218441**

NSMase2 (SMPD3) (NM_018667) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NSMase2 (SMPD3) (NM_018667) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMPD3
Synonyms:	NSMASE2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide
Sequence:

>RC218441 representing NM_018667
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTTTTGTACACGACCCCTTCTAACAGCTGTCTGTCCGCCCTGCACTGTGTGCCTGGGCCCTTA
TCTTTCATGCTACTGGCTGGTGGACCGCTCGCTGCCTCCTTCATACCCACCACCTACGAGAAGCGCCA
GCGGGCAGACGACCCGTGCTGCCTGCAGCTGCTCTGCACTGCCCTCTTACGCCCATCTACCTGGCCCTC
CTGGTGGCCTCGCTGCCCTTGGCTTTCTCGGCTTTCTCTTCTGGTCCCCACTGCAGTCGGCCCGCCGGC
CCTACATCTATTACGGCTGGAAGACAAGGGCTGGCCGGTGGGGCAGCCCTGCTCAGTGAATGGAAGGG
CACGGGGCTGGCAAAGCTTCTGCTTTGCCACTGCCAACGTCTGCCTCTGCCGACTCACTCGCCAGG
GTCAACAACCTTTTTAACACCAAGCGCGGGCCAAGGAGATCGGGCAGAGAATCCGCAATGGGGCCGCC
GGCCCCAGATCAAAATTTACATCGACTCCCCACCAATACCTCCATCAGCGCCGTAGCTTCAGCAGCCT
GGTGTACCACAGGGCGCGATGGGGTGGCCCGGCCCTCCCGGGAGCATTAAAGAGGACAGCCTCTGTG
GAGTACAAGGGTACGGTGGGGCGCACCCCGGTGACGAGGCTGCCAACGGCCAGCCTCTGGGGACCCTG
TCGACAGCAGCAGCCCGAGGATGCCTGCATCGTGCATCGGTGGCGAGGAGGGCGGCCCGCCACCTGA
AGCTGACGACCCTGTGCCTGGGGCCAGGCCAGGAACGGAGCTGGCGGGGGCCAAAGGGCCAGACGCC
AACATAATCAGCAGGACGGGGATTGAGGGAGCCTGGGCAGCCCTCGGCCTCCCGGGAGTCCCTGGTGA
AGGGGCGAGCTGGGCCAGACACCAAGTGCAGCGGGGAGCCAGGTGCCAACAGCAAGCTCCTGTACAAGGC
CTCGGTGGTGAAGAAGCGGGCTGCACGCAGGAGGGCCACCCGACGAGGCCCTTCGACCATGAGGTCTCC
GCCTTCTTCCCGCCAACCTGGACTTCTGTGCCTGCAGGAGGTGTTGACAAGCGAGCAGCCACCAAT
TGAAAGAGCAGCTGCACGGCTACTTCGAGTACATCCTGTACGACGTCGGGGTCTACGGCTGCCAGGGCTG
CTGCAGCTTCAAGTGTCTCAACAGCGGCCCTCTCTTTGCCAGCCGCTACCCCATCATGGACGTGGCCTAT
CACTGTTACCCCAACAAGTGTAAACGACGATGCCCTGGCCTCTAAGGGAGCTCTGTTTCTCAAGTGCAGG
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GGACAGCGCCATCCGGTGTGGGCAGCTGGACCTGCTTCAGGACTGGCTGGCTGATTTCCGAAAATCTACC
TCCTCGTCCAGCGCAGCCAACCCCGAGGAGCTGGTGGCATTGACGTCGTCTGTGGAGATTTCACTTTG
ATAACTGCTCCTCTGACGACAAGCTGGAGCAGCAACACTCCCTGTTACCCACTACAGGGACCCCTGCCG
CCTGGGGCCTGGTGAAGGAGAAGCCGTGGGCCATCGGTACTCTGCTGGACACGAACGGCCTGTACGATGAG
GATGTGTGACCCCCGACAACCTGCAGAAGTCTGGAGAGTGAAGGGCCGAGGAGTACCTGGCGT
TTCCCACCAGCAAGAGCTCGGGCCAGAAGGGCGGAAGGAGCTGCTGAAGGGCAACGGCCGGCGCATCGA
CTACATGCTGCATGCAGAGGAGGGGCTGTGCCAGACTGGAAGGCCGAGGTGGAAGAATTCAGTTTTATC
ACCCAGCTGTCCGGCCTGACGGACCACCTGCCAGTAGCCATGCGACTGATGGTGTCTTCGGGGGAGGAGG
AGGCA

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC218441 representing NM_018667
Red=Cloning site Green=Tags(s)

MVLYTTPFPNSCLSALHCVSWALIFPCYWLVDRLAASFIPTTYEKQRADDPCCQLLCTALFTPIYLAL
 LVASLPFAFLGFLFWSPQLQSARRPYIYSRLLEDKGLAGGAALLSEWKGTGPGKSFCFATANVCLLPDSLAR
 VNNLFNTQARAKEIGQIRNGAARPQIKIYIDSPTNTSISAASFSSLVSPQGGDGVARAVPGSIKRTASV
 EYKGDGGRHPGDEAANGPASGDPVDSSSPEDACIVRIGGEEGRRPPEADDPVPGGQARNGAGGGPRGQTP
 NHNQDGDGDSGSLGSPSASRESLVKGRAGPDTASGEPGANSKLLYKASVVKAAAARRRRHPDEAFDHEVS
 AFFPANLDFLCLQEVFDKRAATKLEQLHGYFEYILYDVG VYGCQGCCSFKCLNSGLL FASRYPIMDVAY
 HCPYCNKNDALASKGALFLKVQVVGSTPQDQRI VGYIACHTLHAPQEDSAIRCGQLDLLQDWLADFRKST
 SSSSAANPEELVAFDVVCGDFNFDNCSSDDKLEQQHSLFTHYRDP CRLGPGEK PWAIGTLLDTNGLYDE
 DVCTPDNLQK VLESEEGRREYLAFPTSKSSGQKGRKELLKGNRRRIDYMLHAE EGLCPDWKAEVEEF SFI
 TQLSGLTDHLPVAMRLMVSSGEEEA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

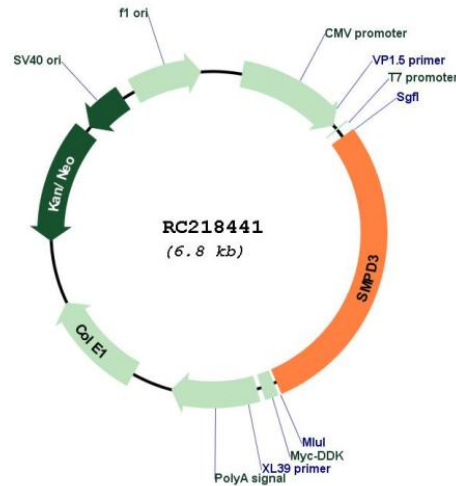
Chromatograms: https://cdn.origene.com/chromatograms/ja1165_g07.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_018667

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:

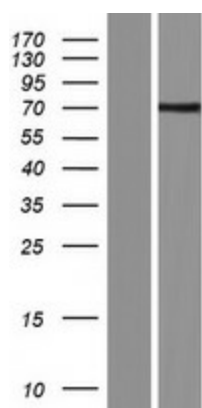
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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_018667.2](#), [NP_061137.1](#)

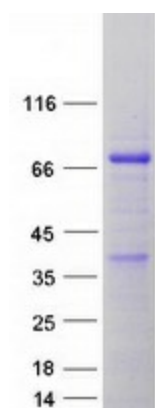
RefSeq Size: 5284 bp

RefSeq ORF:	1968 bp
Locus ID:	55512
UniProt ID:	Q9NY59
Cytogenetics:	16q22.1
Domains:	Exo_endo_phos
Protein Families:	Transmembrane
Protein Pathways:	Metabolic pathways, Sphingolipid metabolism
MW:	70.9 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. Probably acts as a regulator of postnatal development and participates in bone and dentin mineralization. [UniProtKB/Swiss-Prot Function]

Product images:



Western blot validation of overexpression lysate (Cat# [LY412973]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218441 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SMPD3 protein (Cat# [TP318441]). The protein was produced from HEK293T cells transfected with SMPD3 cDNA clone (Cat# RC218441) using MegaTran 2.0 (Cat# [TT210002]).