

Product datasheet for **RC219816**

Acid sphingomyelinase (SMPD1) (NM_001007593) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Acid sphingomyelinase (SMPD1) (NM_001007593) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Acid sphingomyelinase
Synonyms:	ASM; ASMASE; NPD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC219816 representing NM_001007593
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCCCGCTACGGAGCGTCACTCCGCCAGAGCTGCCCCAGTCCGGCCGGGAGCAGGGACAAGACGGGA
 CCGCCGGAGCCCCGGACTCCTTTGGATGGGCCTGGTGTGGCGCTGGCGCTGGCGCTGGCGCTGGCGCT
 GGCTCTGTCTGACTCTCGGGTTCTCTGGGCTCCGGCAGAGGCTCACCTCTTTCTCCCAAGGCCATCCT
 GCCAGGTTACATCGCATAGTCCCCGGCTCCGAGATGTCTTTGGGTGGGGAAACCTCACCTGCCAATCT
 GCAAAGGTCTATTACCGCCATCAACCTCGGGCTGAAGGAACCAATGTGGCTCGCGTGGGCTCCGTGGC
 CATCAAGTGTGCAATCTGCTGAAGATAGCACACCTGCCGTGTGCAATCCATTGTCCACCTCTTTGAG
 GATGACATGGTGGAGGTGTGGAGACGCTCAGTGTGAGCCATCTGAGGCTGTGGCCTGCTCTGGGCT
 CCACCTGTGGGACTGGGACATTTCTCATCTTGAACATCTCTTGCCTACTGTCCGAAGCCGCCCC
 CAAACCCCTAGCCCCAGCCCCAGGTCGCCCTGTGAGCGCATCTCTCCTCACTGACTGCACTGG
 GATCATGACTACCTGGAGGGCACGGACCTGACTGTGCAGACCCACTGTGCTGCCGCCGGGTTCTGGCC
 TGCCGCCCGCATCCCGGCCAGGTGCCGGATACTGGGGCGAATACAGCAAGTGTGACCTGCCCTGAGGAC
 CCTGGAGAGCCTGTTGAGTGGGCTGGGCCAGCCGCCCTTTGATATGGTGTACTGGACAGGAGACATC
 CCCGCACATGATGTCTGGCACCAGACTCGTCAGGACCAACTGCGGGCCCTGACCACCGTCACAGCACTTG
 TGAGGAAGTTCCTGGGGCAGTGCCAGTGTACCCTGCTGTGGGTAAACATGAAAGCACACCTGTCAATAG
 CTTCCCTCCCCCTTATTGAGGGCAACCACTCCTCCCGCTGGCTCTATGAAGCGATGGCCAAGGCTTG
 GAGCCCTGGTGCCTGCCGAAGCCCTGCGCACCCCTCAGAATTGGGGGTTCTATGCTCTTCCCCATACC
 CCGGCTCCGCCCTCATCTCTCAATATGAATTTTGTCCCGTGAGAACTCTGGCTCTTGATCAACTC
 CACGGATCCCGCAGGACAGCTCCAGTGGCTGGTGGGGAGCTTCAGGCTGCTGAGGATCGAGGAGACAAA
 GTGCATATAATTGGCCACATTCCCCAGGGCACTGTCTGAAGAGCTGGAGCTGGAATTATTACGAATTG
 TAGCCAGGTATGAGAACACCCTGGCTGCTCAGTCTTTGGCCACACTCATGTGGATGAATTTGAGGTCTT
 CTATGATGAAGAGACTCTGAGCCGGCCGCTGGCTGTAGCCTTCTGGCACCCAGTCAACTACCTACATC
 GGCCTTAATCCTGGTTACCGTGTGTACCAATAGATGGAACTACTCCGGGAGCTCTCACGTGGTCTGG
 ACCATGAGACCTACATCTGAATCTGACCCAGGCAAACATACCGGGAGCCATACCGCACTGGCAGCTTCT
 CTACAGGGCTCGAGAAACCTATGGGCTGCCAACACACTGCCTACCGCCTGGCACAACTGGTATATCGC
 ATCGGGGGCAGCATGCAACTTTCCAGACCTTCTGGTTTCTCTACCATAAGGGCCACCCACCTCGGAGC
 CCTGTGGCAGCCCTGCCGTCTGGCTACTCTTTGTGCCAGCTCTCTGCCCGTGTGACAGCCCTGCTCT
 GTGCCGCCACCTGATGCCAGATGGGAGCCTCCAGAGGCCAGAGCCTGTGGCCAAGGCCACTGTTTTGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC219816 representing NM_001007593
 Red=Cloning site Green=Tags(s)

MPRYGASLRQSCPRSGREQGDGTAGAPGLLWMLVLALALALALALALSDSRVLWAPAEHPLSPQGH
 ARLHRIVPRLRDVFVGWNLTCPICKGLFTAINLGLKEPNVARVGSVAIKLNLKIAPPVCSIVHLFE
 DDMVEVWRRSVLSPSEACGLLLGSTCGHWDIFSSWNI SLPTVPKPPKPPSPAPGAPVSRILFLDLHW
 DHDYLEGTDPCADPLCCRRGSLPPASRPGAGYWGEYSKCDLPLRTLESLLSGLGPAGPFDMVYWTGDI
 PAHDVWHQTRQDLRALTTVTALVRKFLGPVPVYPAVGNHSTPVNSFPFPIEGNHSSRWLYEAMAKAW
 EPWLPAEALRTLRIIGGFYALSPYPGLRLISLNMNFCRENFWLLINSTDPAGLQWL VGELQAAEDRGDK
 VHIIGHIPPGHCLKSWSWNYRIVARYENTLAAQFFGHVDFEVEFYDEETLSRPLAVAF LAPSATTYI
 GLNPGYRVYQIDGNYSGSSHVLDHETYILNL TQANIPGAIPHWQLLYRARETYGLPNTLP TAWHNLVYR
 MRGDMQLFQTFWFLYHKGHPPSEPCGTPCRLATLCAQLSARADSPALCRHLM PDGSLPEAQLSWRPLFC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8068_e08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001007593

ORF Size: 1890 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.

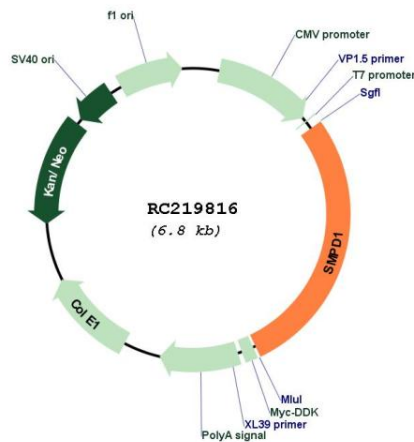
RefSeq: [NM_001007593.3](#)

RefSeq Size: 2341 bp

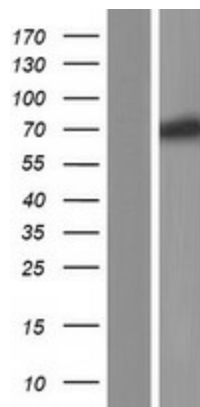
RefSeq ORF: 1893 bp

Locus ID: 6609
UniProt ID: [P17405](#)
Cytogenetics: 11p15.4
Protein Families: Druggable Genome, Transmembrane
Protein Pathways: Lysosome, Metabolic pathways, Sphingolipid metabolism
MW: 69.81 kDa
Gene Summary: The protein encoded by this gene is a lysosomal acid sphingomyelinase that converts sphingomyelin to ceramide. The encoded protein also has phospholipase C activity. Defects in this gene are a cause of Niemann-Pick disease type A (NPA) and Niemann-Pick disease type B (NPB). Multiple transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2010]

Product images:



Circular map for RC219816



Western blot validation of overexpression lysate (Cat# [LY423515]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219816 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).