

Product datasheet for **RG219758**

Acid sphingomyelinase (SMPD1) (NM_000543) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Acid sphingomyelinase (SMPD1) (NM_000543) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Acid sphingomyelinase
Synonyms:	ASM; ASMASE; NPD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG219758 representing NM_000543
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCCGCTACGGAGCGTCACTCCGCCAGAGCTGCCCCAGTCCGGCCGGGAGCAGGGACAAGACGGGA
 CGCCCGGAGCCCCGGACTCCTTTGGATGGGCCTGGTGTGGCGCTGGCGCTGGCGCTGGCGCTGGCGCT
 GGCTCTGTCTGACTCTCGGGTTCTCTGGGCTCCGGCAGAGGCTCACCTCTTTCTCCCAAGGCCATCCT
 GCCAGGTTACATCGCATAGTCCCCGGCTCCGAGATGTCTTTGGGTGGGGAAACCTCACCTGCCAATCT
 GCAAAGGTCTATTACCAGCCATCAACCTCGGGCTGAAGAAGGAACCCAATGTGGCTCGCGTGGGCTCCGT
 GGCCATCAAGCTGTGCAATCTGCTGAAGATAGCACCACTGCCGTGTGCCAATCCATTGTCCACCTCTTT
 GAGGATGACATGGTGGAGGTGTGGAGACGCTCAGTGTGAGCCCATCTGAGGCCTGTGGCCTGCTCTGG
 GCTCCACCTGTGGGCACTGGGACATTTTCTCATCTTGAACATCTCTTTGCCTACTGTGCCGAAGCCGCC
 CCCCAAACCCCTAGCCCCCAGCCCCAGGTGCCCTGTGAGCCGCATCCTCTTCTCACTGACCTGCAC
 TGGGATCATGACTACCTGGAGGGCAGGACCCTGACTGTGCAGACCCACTGTGCTGCCGCCGGGGTTCTG
 GCCTGCCGCCCGCATCCCGGCCAGGTGCCGGTACTGGGGCGAATACAGCAAGTGTGACCTGCCCTGAG
 GACCTGGAGAGCCTGTTGAGTGGGCTGGGCCAGCCGGCCCTTTTGATATGGTGTACTGGACAGGAGAC
 ATCCCCGCACATGATGTCTGGCACCAGACTCGTCAGGACCAACTGCGGGCCCTGACCACCGTCACAGCAC
 TTGTGAGGAAGTTCCTGGGGCCAGTGCCAGTGTACCCTGCTGTGGGTAAACATGAAAGCACACCTGTCAA
 TAGCTTCCCTCCCCCTTATTGAGGGCAACCACTCCTCCCGTGGCTCTATGAAGCGATGGCCAAGGCT
 TGGGAGCCCTGGTGCCTGCCGAAGCCCTGCGCACCCCTCAGAATTGGGGGGTTCTATGCTCTTCCCCAT
 ACCCCGGTCTCCGCCTCATCTCTCAATATGAATTTTTGTTCCCGTGAGAACTTCTGGCTTTGATCAA
 CTCCACGGATCCCGCAGGACAGCTCCAGTGGCTGGTGGGGAGCTTCAGGCTGCTGAGGATCGAGGAGAC
 AAAGTGCATATAATTGGCCACATTTCCCCAGGGCACTGTCTGAAGAGCTGGAGCTGGAATTATTACCGAA
 TTGTAGCCAGGTATGAGAACCCTGGCTGCTCAGTTCTTTGGCCACACTCATGTGGATGAATTTGAGGT
 CTTCTATGATGAAGAGACTCTGAGCCGGCCGCTGGCTGTAGCCTTCTGGCACCCAGTGAACACTACCTAC
 ATCGGCCTTAATCCTGGTTACCGTGTGTACCAATAGATGGAACTACTCCGGGAGCTCTCACGTGGTCC
 TGGACCATGAGACCTACATCCTGAATCTGACCCAGGCAACATACCGGGAGCCATACCGCACTGGCAGCT
 TCTCTACAGGGCTCGAGAAACCTATGGGCTGCCAACACACTGCCTACCGCTGGCACAACTGGTATAT
 CGCATGCGGGGCGACATGCAACTTTCCAGACCTTCTGGTTTCTCTACCATAAGGGCCACCACCCTCGG
 AGCCCTGTGGCAGCCCTGCCGTCTGGCTACTCTTTGTGCCAGCTCTCTGCCCGTGTGACAGCCCTGC
 TCTGTGCCGCACCTGATGCCAGATGGGAGCCTCCAGAGGCCAGAGCCTGTGGCCAAGGCCACTGTTT
 TGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG219758 representing NM_000543
 Red=Cloning site Green=Tags(s)

MPRYGASLRQSCPRSGREQGDGTAGAPGLLWMGLVLALALALALALALSDSRVLWAPAEAHPLSPQGH
 ARLHRIVPRLRDVFGWGNLTCPICKGLFTAINLGLKKEPNVARVGSVAIKLCNLLKIAPPVCSIVHLF
 EDDMVEVWRRSVLSPSEACGLLLGSTCGHWDIFSSWNI SLPTVPKPPKPPSPPAPGAPVSRILFLDLH
 WDHDYLEGTDPCADPLCCRRGSLPPASRPAGYWGEYSKCDLPLRRTLESLLSGLGPAGPFDMVYWTGD
 IPAHDVWHQTRQQLRALTTVTALVRKFLGPVPVYPAVGNHSTPVSFPPPFIEGNHSSRWLYEAMAKA
 WEPWLPALRTRLRIGGFYALSPYPGLRLISLNMNFC SRENFWLLINSTDPAGQLQWL VGELQAAEDRGD
 KVHIIGHIPPGHCLKSWSNYYRIVARYENTLAAQFFGHTHVDFEFVYDEETLSRPLAVAF LAP SATTY
 IGLNPGYRVYQIDGNYS GSSHVVLDHETYILNLTQANIPGAI PHWQLYRARETYGLPNTLPTAWHNLVY
 RMRGDMQLFQTFWFLYHKGHPPEPCGTPCRLATLCAQLSARADSPALCRHLM P D G S L P E A Q S L W P R P L F
 C

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM_000543

ORF Size: 1893 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_000543.5](#)

RefSeq Size: 2473 bp

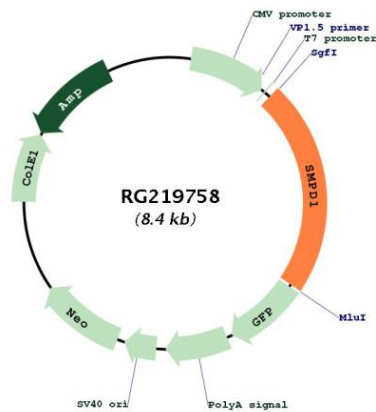
RefSeq ORF: 1896 bp

Locus ID: 6609

UniProt ID: [P17405](#)

Cytogenetics:	11p15.4
Domains:	Metallophos, SAPB
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Lysosome, Metabolic pathways, Sphingolipid metabolism
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 RG219758