

Product datasheet for **SC112589**

SMPD4 (NM_017951) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMPD4 (NM_017951) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMPD4
Synonyms:	NEDMABA; NEDMEBA; NET13; NSMASE-3; NSMASE3; SKNY
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_017951, the custom clone sequence may differ by one or more nucleotides

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ATGACGACTTTCGGCGCCGTGGCGGAATGGCGGCTTCCATCTCTGAGGCGAGCGACGCTATGGATCCCAC
AGTGGTTTGCTAAGAAGGCCATTTCAACTCTCCACTGGAGGCTGCTATGGCGTTCCTCACCTGCAGCA
GCCAGCTTTCTACTGGCTAGCCTGAAAGCTGACTCTATAAATAAGCCCTTTCACAGCAGTGCCAAGCA
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TTTTTGGCAGCCTAGATGGTGTCTCGTTGGCTGGAACCTCCGCTGCTTACAGGGGCGCGTGAATCCTGT
GGAGTACAGCATCGTGATGGAATTTCTCGACCCTGGTGGCCCAATGATGAAGTTGGTTTTATAAGCTTCAA
GCTGAAGACTATAAGTTCGACTTTCCTGTCTCCTACTTGCCTGGTCTGTGAAGGCGTCCATCCAGGAGT
GCATCCTCCCTGACAGTCTCTGTACCACAACAAGGTCCAGTTCACCCCTACTGGGGCCTTGGTCTGAA
CTTGGCCCTGAATCCGTTGAGTATTACATATTCTTCTTGCCTTGAGCCTCATCACTCAGAAGCCACTT
CCTGTGCTCCCTCCACGTCGTAATTGACTGTGCCTATTTATCCTGGTGGACAGGTACCTGTCATGGT
TCCTGCCACCGAAGGCAGTGTGCCCCACCACCTCCTCCAGCCAGGGGGGACCAGCCCTCACCACC
TCCCAGGACACCAGCCATACCCTTTCCTTCCATGGCCTCCACCACACTAGCCTCCTAAAGCGACACATC
TCTCATCAGACGCTGTGAATGCAGACCCCGCCTCCCACGAGATCTGGAGGTGAGAACTCTGCTCCAGG
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CAGCCCCCTGGAGGAGTCAACCGGGCTGCTGTCCGAGGTTGTCAGCAGAACTCTACCTCTTCTTG
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GCGCTCCGCACAGACCTGGTCAGCCCCAAGCACGCGCTCATGGTGTTCGAGTGGCCAAAGTCTTTGCC
AGCCCAACCTGGCTGAGATGATTAGAAAGGTGAGCAGCTATTCTGGAGCCAGAGCTGGTCATCCCCCA
CCGCCAGCACCAGCTTTCACGGCCCCACATTCACTGGGAGCTTCTGTCACTTGGCCACCAGCGGTC
ACTGATGCCTCCTCAAGGTGAAGAGCCACGCTACAGCCTGGAGGGCCAGGACTGCAAGTACACCCCGA
TGTTTGGGCCCGAGGCCCGCACCCCTGGTCTGCGCCTCGCTCAGCTCATCACACAGGCCAAACACACAGC
CAAGTCCATCTCCGACCAGTGTGCGGAGAGCCCGCTGGCCACTCCTTCTCTCATGGCTGGGCTTTAGC
TCCATGGACACCAATGGCTCCTACACAGCCAACGACCTGGACGAGATGGGGCAAGACAGTGTCCGGAAGA
CAGATGAATACCTGGAGAAGGCCCTGGAGTACCTGCGCCAGATATTCCGGCTCAGCGAAGCGCAGCTCAG
GCAGTTACACTCGCCTTGGGCACCACCAGGATGAGAATGGAAAAAGCAACTCCCCGACTGCATCGTG
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TTGAGTACCAGGGGACCCGGAGCTGCAGCCATCCGGAGCTATGAGATCGCCAGCTTGGTCCGCACACT
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TTCTCGGCAGCTTCTGTGCTACCACCTCACAGAACCTGGGCTGGCCAGCAGGCACCTGCTGAGCCCTG
TGGGCGGAGGCAGGTGGCCGGCCACACCCGGGCCAGGCTCAGCCTGCGCTTCTGGGCAGTTACCG
GACGCTGGTCTCGCTGCTGCTGGCTTCTTGTGGCCTCTCTGTTCTGCGTCGGGGCCCTCCCATGCAGC
CTGCTGCTCACCTGGGCTATGTCTCTACGCCTCTGCCATGACTGCTGACCGAGCGGGGAAGCTGC
ACCAGCCCTGA
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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_017951 unedited NNCCGTTCGAATTTGTATACGACTCATATAGGCGGCCGCGNAATTCGCACGAGGCGGAAT GGCGGCTTCCATCTCTGAGGCGAGCGACGCTATGGATCCCACAGTGGTTTGCTAAGAAGG CCATTTTCAACTCTCCACTGGAGGCTGCTATGGCGTTCCTCACCTGCAGCAGCCAGCT TTCTACTGGCTAGCCTGAAAGCTGACTCTATAAATAAGCCCTTTGCACAGCAGTGCCAAG ACTTGGTTAAAGTCATTGAGGACTTTCCAGCAAAGGAGCTGCACACCATTCCCATGGC TGGTAGAAAGCATTTTTGGCAGCCTAGATGGTGTCTCGTTGGCTGGAACCTCCGCTGCT TACAGGGGCGCGTGAATCCTGTGGAGTACAGCATCGTGATGGAATTTCTCGACCCTGGTG GCCAATGATGAAGTTGGTTTATAAGCTTCAAGCTGAAGACTATAAGTTCGACTTTCCTG TCTCTACTTGCCTGGTCTGTGAAGGCGTCCATCCAGGAGTGCATCCTCCCTGACAGTC CTCTGTACCACAACAAGGTCCAGTTCACCCCTACTGGGGCCTTGGTCTGAACTTGGCC TGAATCCGTTTCGAGTATTACATATTCTTCTTTCCTTGGCCTGAGCCTCATCACTCAGAAGCCAC TTCTGTGTCCCTCCACGTCCGTACTTCAGACTGTGCCTATTTTCATCCTGGTGGACAGGT ACCTGTATGGTTCCTGCCACCGAAAGCAGTGTGCCCCACCCTCTCCTCCAGCCAG GGGGACCAGCCCTCACCACCTCCAGACACCAGCCATACCCTTTGCTTCTATGGCCTN CACCACACTAGCCCTCCTAAGCGACACATCTCTCATCAGAN</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_017951 unedited NGGCTAGGGGCATGAACTTNNATTTCCATGGTCGTTACAGCCTTCATTTTTGNGTCACAG NGCCCTAAATGCCATTATGCTCAGTTTACATCAAATAACAAAGCCCAACATTTACAATT TCAAAAACATTAAGCAAACCCCAAAAACCCNACACCGAAAACAAAGGCTTGGTTTGA AATCACCCTGAGATGCTTCTCCCTCGCATGTCGCCTGTGGGTGAATGAAGGTGAAG ACCCCGTGCTGGTTTCTGTCAGAGAATCTGTAGTTGTATATTTTGAATACTTAAGTACCA CTGAACGGTTGCCATGTCTTTGAGCACTTGATGTTACTGAAGTGACAATGCTTCTGACCA TCTTTGGCTGCAGAGCAGAACTGGCAGAATCCGACCCCATCGACCCAGCAGTGTCCCA ACGCCTGAGGACCAGCACCCATCTGTGACAAGGCACAGGGGTCCGCGATGTTGGCCACTG CTTTGGGTGATGTGCTCAATGGCTTGGGGTCTGCGGTGAAGCCCTGGGCTCTGGGAGGG TCTTAGGCTCCTGAAACATGGAATTCTACGGCCAGTCTTGGAACAGCTGGGAGAATG AAGAACGCCCTCACAGTGAAGAATCAGGACAGCCACTCTGGTTTTCTCACAACCTCA GAACTTTGATTCTTCTGAGTGGAGACTTAAACCTGTCCCTGTCCACCCAGAGAG AGGAGCGCCCCAACCCACTCTGCCACCCTTAAGGCCGCCCGGGGGAAGCCAGGCCAG GTGGCTGTTTGCAGGCTGGCTCTCCAGTGGTGAACAAAATACCCAAAGGGCCTGGGG AAAAAAGGCCCNAAAGCTTGTGGCCCCGAATCCTTGCCGAGGGAGGAAAAGCCGCCCT TAATCTTTCCTTGCCTGCCAAAAGTACTTTTGGACCTGTGAATACCCTTCTTGGAGCCACC CA</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_017951
Insert Size:	4080 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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_017951.1](#), [NP_060421.1](#)

RefSeq Size: 3920 bp

RefSeq ORF: 1818 bp

Locus ID: 55627

UniProt ID: [Q9NXE4](#)

Cytogenetics: 2q21.1

Protein Families: Transmembrane

Protein Pathways: Metabolic pathways, Sphingolipid metabolism

Gene Summary: The protein encoded by this gene is a sphingomyelinase that catalyzes the hydrolysis of membrane sphingomyelin to form phosphorylcholine and ceramide. This gene is activated by DNA damage, cellular stress, and tumor necrosis factor, but it is downregulated by wild-type p53. The encoded protein localizes to the endoplasmic reticulum and Golgi network. [provided by RefSeq, Mar 2017]

Transcript Variant: This variant (2) encodes the longest isoform (2). CCDS Note: This CCDS representation uses the 5'-most in-frame start codon. While this start codon is well-conserved, it should be noted that other than human and chimp, all other species have indels that follow this start codon. Other primates and rodents have frameshifting indels, and thus cannot use this start codon. However, some mammalian species, including cow, pig and dog, contain additional compensating indels that bring them back in frame; these species could therefore use the start codon represented in this CCDS. An alternative downstream start codon, which is more widely conserved and has a stronger Kozak signal, also exists. It is possible that leaky scanning by ribosomes would allow the downstream start codon to be used, at least some of the time. The use of the downstream start codon would result in a protein that is 39 aa shorter at the N-terminus. There is no experimental evidence showing which start codon is preferentially used in vivo.