

## Product datasheet for **SC114022**

### **SMPD4 (NM\_017751) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SMPD4 (NM_017751) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMPD4
Synonyms:	NEDMABA; NEDMEBA; NET13; NSMASE-3; NSMASE3; SKNY
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_017751, the custom clone sequence may differ by one or more nucleotides

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ATGACGACTTTCGGCGCCGTGGCGGAATGGCGGCTTCCATCTCTGAGGCGAGCGACGCTATGGATCCCAC
AGTGGTTTGTCTAAGAAGGCCATTTTCAACTCTCCACTGGAGGCTGCTATGGCGTTCCTCACCTGCAGCA
GCCAGCTTTCTACTGGCTAGCCTGAAAGCTGACTCTATAAATAAGCCCTTTCACAGCAGTGCCAAGCA
TTGGTTAAAGTCATTGAGGACTTCCAGCAAAGGAGCTGCACACCATCTCCCATGGCTGGTAGAAAGCA
TTTTTGGCAGCCTAGATGGTGTCTCGTTGGCTGGAACCTCCGCTGCTTACAGGGGCGCGTGAATCCTGT
GGAGTACAGCATCGTGATGGAATTTCTCGACCCTGGTGGCCCAATGATGAAGTTGGTTTATAAGCTTCAA
GCTGAAGACTATAAGTTCGACTTTCCTGTCTCCTACTTGCTGGTCTGTGAAGGCGTCCATCCAGGAGT
GCATCCTCCCTGACAGTCTCTGTACCACAACAAGGTCCAGTTCACCCCTACTGGGGGCTTGGTCTGAA
CTTGGCCCTGAATCCGTTGAGTATTACATATTCTTCTTGCCTTGAGCCTCATCACTCAGAAGCCACTT
CCTGTGCTCCCTCCAGTCCGTACTTCAGACTGTGCCTATTTATCCTGGTGGACAGGTACCTGTCATGGT
TCCTGCCACCGAAGGCAGTGTGCCCCACCACCTCCTCCAGCCAGGGGGGACCAGCCCTCACCACC
TCCAGGACACCAGCCATACCCTTGTCTCCTATGGCCTCCACCACACTAGCCTCCTAAAGCGACACATC
TCTCATCAGACGTCTGTGAATGCAGACCCCGCCTCCCACGAGATCTGGAGGTGAGAACTCTGCTCCAGG
TTTTTGTGAAATGTGGCTTCATCACTATTCTTGGAGATGTATCAAAAATGCAGTCCCCTCATGCCAA
GGAGTCGTTACGCTACTGAGGAGCATGTGTTGGTGGTGCAGCCTGCTGCTGAAGCACCTGCACGCCCTT
GCCAACAGCCTGAAGCCAGAGCAGGCTCACCCTCCGCCCACTCCACGCCACCAGCCCTGGAGGAGT
TCAAACGGGCTGCTGTCCGAGGTTCTGTCAGCAGAACTCTACCTCTTCTTGCAGCATTGCTTTGGCCA
CTGGCCCTGGACGCATCGTTCAGAGCTGTCTGGAGATGTGGCTGAGCTACCTGCAGCCGTGGCAGTAC
GGCCTGACAAGCAGGCTCCGGGCAGCGACTCCAGCCCGGTGTGTGTCGGAGAAATGGGCACCCCTTGTG
TCCAGGAGAACCCTGCTGATGTACACCAAGTTGTTTGTGGGCTTCTGAACCGCGCCTCCGCACAGACCT
GGTCAGCCCAAGCAGCGCTCATGGTGTTCGAGTGGCCAAAGTCTTGGCCAGCCCAACTGGCTGAG
ATGATTGAGAAAGGTGAGCAGCTATTCCTGGAGCCAGAGCTGGTCATCCCCCACCAGCCAGCACCAGCTCT
TCACGGCCCCACATTCACTGGGAGCTTCTGTACCCTGGCCACCAGCGGTCACTGATGCCTCCTTCAA
GGTGAAGAGCCACGTCTACAGCCTGGAGGGCCAGGACTGCAAGTACACCCCGATGTTTGGGCCGAGGCC
CGCACCCTGGTCTGCGCTCGCTCAGCTCATCACACAGGCCAAACACACAGCCAAGTCCATCTCCGACC
AGTGTGCGGAGAGCCCGCTGGCCACTCCTTCTCTCATGGCTGGGCTTGTAGCTCCATGGACACCAATGG
CTCCTACACAGCCAACGACCTGGACGAGATGGGGCAAGACAGTGTCCGGAAGACAGATGAATACCTGGAG
AAGGCCCTGGAGTACCTGCGCCAGATATCCGGCTCAGCGAAGCGCAGCTCAGGCAGTTCACACTCGCCT
TGGGCACCACCCAGGATGAGAATGGAAAAAGCAACTCCCGACTGCATCGTGGGTGAGGACGGACTCAT
CCTTACGCCCCTGGGGCGGTACCAGATCATCAATGGGCTGCGAAGGTTTGAATTTGAGTACCAGGGGGAC
CCGGAGCTGCAGCCCATCCGGAGCTATGAGATCGCCAGCTTGGTCCGCACACTCTTATAGGCTGTCGCTG
CCATCAACCACAGATTTGAGGACAGATGGCGGCTCTGTGTTCCCGGGATGACTTCTCGGCAGCTTCTG
TCGCTACCACCTCACAGAACCTGGGCTGGCCAGCAGGCACCTGCTGAGCCCTGTGGGGCGGAGGCAGGTG
GCCGCCACACCCGCGGCCCCAGGCTCAGCCTGCGCTTCTGGGCAGTTACCGGACGCTGGTCTCGCTGC
TGCTGGCCTTCTCGTGGCCTCTCTGTTCTGCGTCGGGCCCTCCCATGCACGCTGCTGCTCACCCTGGG
CTATGTCCTCTACGCCTCTGCCATGACACTGCTGACCGAGCGGGGAAGCTGCACCAGCCCTGA
```

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_017751 unedited  
 CCATTATGATACGACTCACTTAGGCGGCCGGAATCGCACGAGGCGGAATGGCGGCTTCC  
 ACCTCTGAAGCGGGCGACGCTATGGGTCCCACAGTGGTTTGTAAAGAAGGCCATTTTCAA  
 CTCTCCATTGGAGGCTGCTATGGCGTCCCTCACCTGCAGCAGCCAGCTTTCTACTGGC  
 CAGCCTGAAAGCTGACTCTATAAATAAGCCCTTGCACAGCAGTGCCAAGACTTGATTAA  
 AGCCATTGAGGATTTTCCAGCAAAGGAGCTGCACACCATCTTCCCATGGCTGGCAGAGAG  
 CATTTTCGGCAGCCTAGATGGTGTCTCCTGGCTGGAACCTCCGCTGCTTACAGGGGCG  
 TGTGAATCCTGTGGAGTACAGCATCGTGATGGAATTTCTCGACACTGGGTAGTGGCCCAA  
 TGATGAAGTTGGTTTATAAGCTTCAAGCTGAAGACTATAAGTTGACTTTCTGTCTCCT  
 ACCTGCCTGGTCTGTGAAGGCGTCCATCCAGGAGTGCATCCTCCCTGACAGTCTCTGT  
 ACCACAGCAAGTCCAGTTCACCCCTACTGGGGCCTTGGTCTGAACCTGGCCCTGAATC  
 CATTGAGTATTACATACTTTCTTTGCCCTGAGCCTCATCACTCAGAAGCCACTCCCTG  
 TGTCCTTACAGTCCGTACTTTAGACTGTGCCTATTTTCCTGGCGGACAGGCACCTGT  
 CATGGTTCCTGCCACCGAAGCTAGTGTGCCCTGCCACTCTCCTCCAGCCAGGGGGGACC  
 AGCCCTCACCCTCCAAAAATGTATATGCGGGCTGGGAGTGGCGGCTGACCCCTGTA  
 ATTCCACCCTTGGGCGGGCCAGCGGACGACCCCTGGGCCACGATTCCAAACCGCCTG  
 GCCAAATGTGAAACCCCTTCTCAATACACCAAGTTC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_017751 unedited  
 GTCTCATGNACACGACGGNACGGCAATTCTTAGAATACGAAGGTTTTTCTTTTTTTT  
 CTTTTTTCTTTTTTCTTTTTTCTTTTACAAAACCAGGGAACAGTGTTTTATTCAGAA  
 CCCATGGGGCGTTACAAGCTTATTTTTTGGCCACAGGCCCTAAAAGGCCTTTATTCTAAG  
 TTTACATAAAAAATACAAAGCCAACTTTTACAATTTAAAAAACATTAAAGCAAACCCCA  
 AAACCCACACCGAAAAACAAAGTTGGGTTGGGAAATAACCACTGAAATGCTGTCTCC  
 CTCGAATGTCCTTGGGGGGGAATGAAGGGGAAAACCCGGGCTGGTTTTTGTAAAAAA  
 ATCTGAAGTTGTATTTTGAATACTTAAGTACCACTGAACGGTGGCCATGTTTTGACC  
 ACTTGATGTTACTGAAGGGACAATGCTTCTGACCATTTTTGGCTGCAAAGCAAAAAGTGG  
 AAAAATCCGACCCATCGACCCAGAAGTGTCCCAACGCTGAGGACCGGCCCATTTG  
 TGACAAGGCACAGGGTCCGCGATTTGGCCACTGCTTTGGGGATGGGCTCAATGGTTT  
 GGGGCTGCGGGGAACCACTGGGCTCTGGGAGGTTTTAGGCCTCTGAAAATGGAATT  
 CACGGCCATTCTTGAACAGCTGGGAAAACATGAAAAACGCCCCAGAGGGAAGAATC  
 AGGAAAGCCACTTTTGGTTTTCTCACACCTTTAAAAATTTGATTCTTCTGAGGGG  
 AGACTTAACCCACCGCCCTGGTCCCAACAAAGAAAGAGGAGGCGCAAAACCACTCTG  
 GCTTACTTAAGGCCACCCAGTGGTGAAGGCGGCCAGGCAATTTTTGGGAGTTGGTCC  
 CAAACTTTGGTGAACAAAATACCACATAGGCCCTGGAAAAAGGCCCGGAAGATGGTCC  
 TGGGCATGAATCTTTGGCAAAGGAAGGGAAAAGGCCCTTTAACTCTGGCTTGTAN

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_017751

**Insert Size:**

3410 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\\_017751.1](#), [NP\\_060221.1](#)

**RefSeq Size:** 3833 bp

**RefSeq ORF:** 2397 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 (1) lacks an alternate in-frame exon in the central coding region, compared to variant 2, resulting in an isoform (1) that is shorter than 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.