

Product datasheet for **RG230482**

SMPD4 (NM_001171083) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMPD4 (NM_001171083) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SMPD4
Synonyms:	NEDMABA; NEDMEBA; NET13; NSMASE-3; NSMASE3; SKNY
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG230482 representing NM_001171083
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACGACTTTCGGCGCGTGGCGGAATGGCGGCTTCCATCTCTGAGCGAGCGACGCTATGGATCCCAC
 AGTGGTTTGTAAAGAAGGCCATTTTCAACTCTCCACTGGAGGCTGCTATGGCGTTCCCTCACCTGCAGCA
 GCCCAGCTTTCTACTGGCTAGCCTGAAAGCTGACTCTATAAATAAGCCCTTTCACAGCAGTGCACAGAGC
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 CTGACAGTCTCTGTACCACAACAAGGTCCAGTTCACCCCTACTGGGGCCTTGGTCTGAACTTGGCCCT
 GAATCCGTTCCGAGTATTACATATTTCTTCTTGCCTTGGCCTCATCACTCAGAAGCCACTTCTGTGTCC
 CTCACGTCCTGACTTCCAGACTGTGCCTATTTTCATCCTGGTGGACAGGTACCTGTCATGGTTCTGCCCA
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 ACCAGCCATACCCTTTGCTTCTATGGCCTCCACCACACTAGCCTCCTAAAGCGACACATCTCTCATCAG
 ACGTCTGTGAATGCAGACCCCGCTCCCAGGAGTCTGGAGGTCAGAAACTCTGCTCCAGGTTTTTGTGG
 AAATGTGGCTTCACTACTATTCCTTGGAGATGTATCAAAAAATGCAGTCCCTCATGCAAGGAGTCCGTT
 CACGCCTACTGAGGAGCATGTGTTGGTGGTGGCCTGCTGCTGAAGCACCTGCACGCCTTGGCAACAGC
 CTGAAGCCAGAGCAGGCTCACCTCCGCCACTCCCACGCCACCAGCCCTGGAGGAGTCAAACGGG
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 GGACGCATCGTTCAGAGTGTCTGGAGATGTGGCTGAGTACCTGCAGCCGTGGCGGTACGCGCCTGAC
 AAGCAGGCTCCGGCAGCGACTCCAGCCCGGTGTGTGTCGGAGAAATGGGCACCCTTTGTCCAGGAGA
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 CAAGCAGCGCTCATGGTGTCCGAGTGGCCAAAGTCTTTGCCAGCCCAACTGGCTGAGATGATTCAG
 AAAGGTGAGCAGCTATTCTGGAGCCAGAGCTGGTCATCCCCACCGCCAGCACCAGCTTTCACGGCCC
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 CAGCCCATCCGGAGCTATGAGATCGCCAGCTTGGTCCGCACACTCTTAGGCTGTGCTGCCATCAACC
 ACAGATTTGCAGGACAGATGGCGGCTCTGTGTTCCCGGATGACTTCTCGGCAGCTTCTGTCGCTACCA
 CCTCACAGAACCTGGGCTGGCCAGCAGGCACCTGCTGAGCCCTGTGGGGCGGAGGCAGGTGGCCGGCCAC
 ACCCGCGGCCAGGCTCAGCCTGCGCTTCTGGGCAGTTACCGGACGCTGGTCTCGTGTGCTGGCCT
 TCTTCGTGGCCTCTGTCTGCGTGGGCCCTCCCATGCACGCTGCTCACCCTGGGCTATGTCCT
 CTACGCCTCTGCCATGACTGCTGACCGAGCGGGGAAGCTGCACCAGCCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG230482 representing NM_001171083
 Red=Cloning site Green=Tags(s)

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MTTFGAVAEWRLPSLRRATLWIPQWF AKKAI FNSPLEAAMAFPHLQQPSFLLASLKADSINKPFAQQCQD
LVKVIEDFPAKGPVKASIQECILPDSPL YHNKVQF TPTGGLGLNLALNPFEYI FFFALSLITQKPLPVS
LHVRTSDCAYFILVDRYLSWFLPTEGSVPPPLSSSPGGTSPSPPPRTPAIPFASYGLHHTSLLKRHISHQ
TSVNADPASHEIWRSETLLQVFVEMWLHHYSLEMYQKMQSPHAKESFTPTEEHVLVVRLLKHLHAFANS
LKPEQASPSAHSHATSPL EEFKRAAVPRFVQKLYLFLQHCFGHWPLDASFRAVLEMWLSYLQPWRYAPD
KQAPGSDSQPRCVSEKWAPFVQENLLMYTKL FVGFLNRALRTDLVSPKHALMVFRVAKVFAQPNLAEMIQ
KGEQLFLEPELVIPHRQHRLFTAPTFTGSFLSPWPPAVTDASFVKVSHVYSLEGQDKYTPMFGPEARTL
VLRLAQLITQAKHTAKSISDQCAESPAGHSFLSWLGFSSMDTNGSYTANDLDEMGQDSVRKTDEYLEKAL
EYLRQIFRLSEAQLRQFTLALGTTQDENGKQLPDCIVGEDGLIL TPLGRYQI INGLRRFEIEYQGDP EL
QPIRSYEIASLVRTLFR LSSAINHRFAGQMAALCSRDDFLGSFCRYHLTEPLASRHLLSPVGRRQVAGH
TRGPRLSLRFLGSYRTLVSLLLAFVVASLFCVGPLPCTLLLT LGYVLYASAMTLLTERGKHLHP
  
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



ACCN: NM_001171083

ORF Size: 2292 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_001171083.2](#), [NP_001164554.1](#)

RefSeq Size: 3614 bp

RefSeq ORF: 2295 bp

Locus ID: 55627

UniProt ID: [Q9NXE4](#)

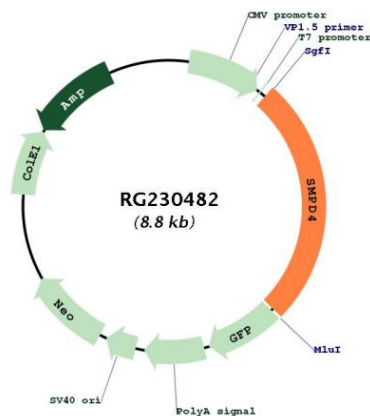
Cytogenetics: 2q21.1

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]

Product images:



Circular map for RG230482