

## Product datasheet for **MG223716**

### Samd8 (NM\_026283) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Samd8 (NM_026283) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Samd8
Synonyms:	1110053F04Rik; 1700010P07Rik; SMSr
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG223716 representing NM\_026283  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCCCGCTGGTAGCCGAGCCGGCTCCCGCTGCCTCCGGCTCCCTCCCCGGCCTTCGGTCTGACTC  
 TCAAGGCGCTGCGCCCCGCTACGCGCCGAGGACCCCGACTCCAACGGGACTTAGACACCGGCTCCGA  
 GCTGGGTCCCGGAGCCCGGCTCCACCCGCGGAGGAAGTAGAGAAAGAAATGGCAGGTCCTAGTCAACTC  
 TGCATTCGCCGCTGGACTACCAAGCATGTGGCTGTGTGGCTGAAGGACGAAGTTTCTTTGAGTATGTGG  
 ACATTTTATGCAACAAGCACCGCCTTGATGGAATCACATTGCTCACGCTGACTGAATATGATCTCCGCTC  
 TCCTCCTCTGGAAATCAAAGTCTAGGAGACATTAACCGTTAATGCTCTCAGTCCGAAAATTGCAGAAA  
 ATACATACTGATTTTTGGAAGAGATGGGCTACAACAGTGACAGTCTATGAGTCCCATGACTCCATTCC  
 TTAGTGCTCTTCAGAGTGCAGACTGGCTCTGTAAACGGAGAGCCACACACAGCTGTGATGGGCCATCCC  
 TGACTTGAGTTCTGATCAGTACAGTACATGAATGGCAAAAACAACATTCTGCTCGAAGACTGGACCCA  
 GAGTACTGGAAGACCATCCTGAGTTGTGTATATGTTTTATAGTATTTGGGTTTACGTCTTTCATTATGG  
 TTATTGTTTCATGAGCGTGTGCCTGACATGCAGACCTACCCACCACTCCCAGATATATTCCTAGACAGTGT  
 TCCTAGGATCCCGTGGGCCTTCTCCATGACCGAAGTGTGTGGCGTGATTCTGTGCTACATTTGGATCCTG  
 GTTCTTCTTCCACAAGCACAGGTCAATCCTTCTGCGAAGGCTCTGTAGTCTGATGGGCACTGTATTCT  
 TGCTTCGCTGCTTACCATGTTTGTGACCTCCCTCTCCGTGCCAGGACAGCACCTGCAGTGTACTGGAAA  
 GATATATGGAAGTGTGTGGGAGAACTACGACGGGCATTTGCCATCTGGAGCGGCTTTGGAATGACTCTG  
 ACTGGCGTCCACACTTGTGGAGACTACATGTTTCAGTGGCCACACAGTTGTTCTAACCATGCTGAATTTCT  
 TTGTCACAGAGTATACCAAGAAGCTGGAATTTCTTGCACACTCTATCCTGGGTTCTCAACCTCTTTGG  
 AATCTTCTTCATCTGGCTGCCCATGAACATTATCCATTGATGTGTTTATTGCCTTTTATATCACAA  
 AGACTCTTTTTGTACTACCATACTCTGGCTAACACCAGAGCGTATCATCAGAGTAGGAGAGCGAGGATTT  
 GGTTCCTATGTTTTCTTCTTTGAATGCAATGTTAATGGCACAGTACCTAATGAATATTGTTGGCCATT  
 TTCTAAACCAGCAATAATGAAAAGACTAATTGGA

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG223716 representing NM\_026283  
 Red=Cloning site Green=Tags(s)

MPAGSRAGSRLRSGSLRPRPSRLTLKALRPAYAPRTPDSNGDLDTGSELGPGSPAPTAEVEKEMAGPSQL  
 CIRRWTTKHVAVWLKDEGFFEYVDILCNKHLRDLGITLLTLEYDLRSPPLEIKVLGDIKRLMLSVRKLQK  
 IHTDVL EEMGYNSDSPMSPMTPFLSALQSADWLCNGEPHSCDGPIDLSSDQYQYMNGKNKHSARRLDP  
 EYWKTI LSCVYV FIVFGFTS FIMVIVHERV PDMQTY PPLPDI FLDSVPRIPWAF SMTEVCGVILCYIWIL  
 VLLLHKHRSILLRRLCSLMGTVFLLRCFTMFVTSLSVPGQHLQCTGKIYGSVWEKLRRAFAIWSGFGMTL  
 TGVHTCGDYMFSGHTVVL TMLNFFVTEYTPRSWNFLHTLSWVLNLF GIFFILAAHEHYSIDVFIAFYITT  
 RLFLYHYHTLANTRAYHQSRARRIWFPMFSFFECNVNGTVPNEYCWPFSKPAIMKRLIG

**TRTRPLE** - GFP Tag - V

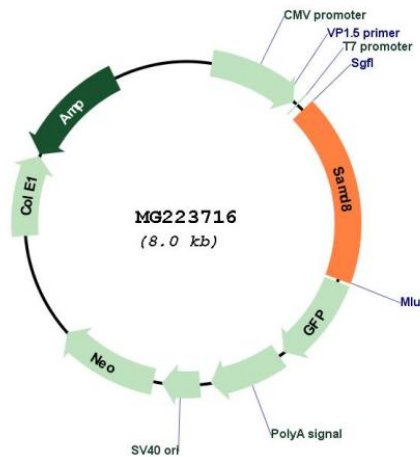
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_026283

ORF Size: 1434 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\\_026283.3](#)

**RefSeq Size:** 6997 bp

**RefSeq ORF:** 1437 bp

**Locus ID:** 67630

**UniProt ID:** [Q9DA37](#)

**Cytogenetics:** 14 A3

**Gene Summary:** sphingomyelin synthases synthesize sphingolipids through transfer of a phosphatidyl head group on to the primary hydroxyl of ceramide. SAMD8 is an endoplasmic reticulum (ER) transferase that has no sphingomyelin synthase activity but can convert phosphatidylethanolamine (PE) and ceramide to ceramide phosphatidylethanolamine (CPE) albeit with low product yield. Appears to operate as a ceramide sensor to control ceramide homeostasis in the endoplasmic reticulum rather than a converter of ceramides. Seems to be critical for the integrity of the early secretory pathway (By similarity).[UniProtKB/Swiss-Prot Function]