

## Product datasheet for **RN211313**

### **Sgms2 (NM\_001014043) Rat Untagged Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Sgms2 (NM\_001014043) Rat Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Sgms2  
**Synonyms:** RGD1305778; spermatin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >RN211313 representing NM\_001014043  
**Red**=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGATATCATAGAGACAGCAAACTTGAAGGTCATTTGGAAAGTCAAACCAACAACCTACCAACACTT  
ACACAAGCCCCTGAAGCTGTAGAAGAGGAGGACAAAAATGGCAAGGGTAAACCAAGACCTTATCCAA  
CGGGCTACGAAAGGGTGCCAAGAAATACCCGGACTACATCCAGATTTCCATGCCCAATGACTCCAGGAAC  
AAGCTTCCCTAGAGTGGTGAAAAACAGGCATTGCCTTTGTGTACGCTCTCTTCAACCTTATCCTGACAA  
CAGTCATGATCACCGTTGTGCACGAGAGGGTCCCTCCCAAGGAACCTCAGCCCTCCACTCCAGACAAAGTT  
TTTTGATTACGTCGACCGGGTCAAATGGGCATTTTCTGTATCAGAAATAAATGGGATGGTATTAGTTGGG  
CTATGGCTCACCCAGTGGCTCTTTCTGAGATACAAGTCAATAGTGGGACGCAGATTCTTCTTTATCATGG  
GAACCTTATACCTGTATCGCTGTATAACTATGTACGCTACTACGTTACCTGTGCCCGAATGCACCTCCA  
GTGTGCTCAAAGCTCAATGGAGACTCTCAGGCAAAAAACAACGGATTCTCCGGTTGCTTTCTGGTGGT  
GGATTGTCATCACGGGATCACACATCCTGTGTGGAGACTTCTCTTTCAGCGGCCATACAGTTGTGCTGA  
CACTTACTTACTTGTTCATCAAAGAATATCACCTCGTCACTTCTGGTGGTACCATTAGCTGTGCTGGCT  
GCTGAGCGCCGCTGGGATCGTCTGCATCCTCGTGGCGCACGAACACTACACGGTCGATGTATCATTTGCG  
TATTACATCACAACACGGCTGTTTTGGTGGTACCCTCATGGCCAATGAAAAGAACTTGAAGGTCTCTT  
CCCAGACTAATTTCTGTCTCGGGCTTGGTGGTCCCATCTTCTATTTTTTTGAAAAGAAATGTGCAAGG  
CTCCATTCCTTGTCTTCTCTGGCCGCTGTCTGGCCCTGGCTGCTTCAAGTCATCGTGCAAAAAG  
TATTCTCGAGTCCAGAAGATCGGGGAGGATAATGAGAAGTCTACC**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001014043



<b>Insert Size:</b>	1098 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001014043.1</a></u> , <u><a href="#">NP_001014065.1</a></u>
<b>RefSeq Size:</b>	1924 bp
<b>RefSeq ORF:</b>	1098 bp
<b>Locus ID:</b>	310849
<b>UniProt ID:</b>	<u><a href="#">Q4JM44</a></u>
<b>Cytogenetics:</b>	2q43
<b>Gene Summary:</b>	Sphingomyelin synthases synthesize the sphingolipid, sphingomyelin, through transfer of the phosphatidyl head group, phosphatidylcholine, on to the primary hydroxyl of ceramide. The reaction is bidirectional depending on the respective levels of the sphingolipid and ceramide. Plasma membrane SMS2 can also convert phosphatidylethanolamine (PE) to ceramide phosphatidylethanolamine (CPE). Major form in liver. Required for cell growth in certain cell types. Regulator of cell surface levels of ceramide, an important mediator of signal transduction and apoptosis. Regulation of sphingomyelin (SM) levels at the cell surface affects insulin sensitivity (By similarity).[UniProtKB/Swiss-Prot Function]