

## Product datasheet for SC119737

### Muscarinic Acetylcholine Receptor M4 (CHRM4) (NM\_000741) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Muscarinic Acetylcholine Receptor M4 (CHRM4) (NM_000741) Human Untagged Clone
Tag:	Tag Free
Symbol:	Muscarinic Acetylcholine Receptor M4
Synonyms:	HM4; M4R
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_000741, RT-PCR generated  
 ATGGCCAACCTTCACACCTGTCAATGGCAGCTCGGGCAATCAGTCCGTGCGCCTGGTCACG  
 TCATCATCCCACAATCGCTATGAGACGGTGGAAATGGTCTTCATTGCCACAGTGACAGGC  
 TCCTGAGCCTGGTGACTGTCGTGGGCAACATCCTGGTGATGCTGTCCATCAAGGTCAAC  
 AGGCAGCTGCAGACAGTCAACAATACTTCTCTCAGCCTGGCGTGTGCTGATCTCATC  
 ATAGGGCGCTTCTCCATGAACCTCTACACCGTGTACATCATCAAGGGCTACTGGCCCTG  
 GGCGCGTGGTCTGCGACCTGTGGCTGGCCCTGGACTACGTGGTGGAGCAACGCCTCCGTC  
 ATGAACCTTCTCATCATCAGCTTTGACCGCTACTTCTGCGTCACCAAGCCTCTCACCTAC  
 CCTGCCCGGCGCACCACCAAGATGGCAGGCCTCATGATTGCTGCTGCCTGGTACTGTCC  
 TTCGTGCTCTGGGCGCCTGCCATCTTGTCTGGCAGTTTGTGGTGGTAAGCGGACGGTG  
 CCCGACAACCAAGTCTTCCATCCAGTTCTGTCCAACCCAGCAGTGACCTTTGGCAGGCC  
 ATTGCTGCCTTCTACCTGCCTGTGGTCATCATGACGGTGTGTACATCCACATCTCCCTG  
 GCCAGTGCAGCCGAGTCCACAAGCACCAGCCCGAGGGCCGAAGGAGAAGAAAGCCAAG  
 ACGCTGGCCTTCTCAAGAGCCCACTAATGAAGCAGAGCGTCAAGAAGCCCCCGCCGGG  
 GAGGCCGCCCCGGGAGGAGCTGCGCAATGGCAAGCTGGAGGAGGCCCGCCCGCAGCGTTG  
 CCACCGCCACCGCGCCCCGTGGCTGATAAGGACACTTCCAATGAGTCCAGCTCAGGCAGT  
 GCCACCCAGAACACCAAGGAACGCCAGCCACAGAGCTGTCCACCACAGAGGCCACCACG  
 CCCGCCATGCCCGCCCCCTCCCCTGACCGCGGGCCCTCAACCCAGCCTCCAGATGGTCC  
 AAGATCCAGATTGTGACGAAGCAGACAGGCAATGAGTGTGTGACAGCCATTGAGATTGTG  
 CCTGCCACGCCGCTGGCATGCGCCCTGCGGCCAACGTGGCCCGAAGTTCGCCAGCATC  
 GCTCGCAACCAAGGTGCGCAAGAAGCGGCAGATGGCGGCCCGGAGCGCAAAGTGACACGA  
 ACGATCTTTGCCATTCTGCTAGCCTTTCATCCTCACCTGGACGCCCTACAACGTCATGGTC  
 CTGGTGAACACCTTCTGCCAGAGCTGCATCCCTGACACGGTGTGGTCCATTGGCTACTGG  
 CTCTGCTACGTCAACAGCACCATCAACCCTGCCTGCTATGCTCTGTGCAACGCCACCTTT  
 AAAAAGACCTTCCGGCACCTGCTGCTGTGCCAGTATCGGAACATCGGCACTGCCAGGTAG



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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_000741 unedited NGGTAATTTTAGATTTGTAAACGACTCATATAGGCGGCCGCCATGTGATGTGAATCTGCA GAATTCGGCTTCAACATGGCCAACTTCACACCTGTCAATGGCAGCTCGGGCAATCAGTCC GTGCGCCTGGTCACGTCATATCCACAATCGCTATGAGACGGTGGAAATGGTCTTCATT GCCACAGTGACAGGCTCCCTGAGCCTGGTACTGTCGTGGGCAACATCCTGGTGATGCTG TCCATCAAGGTCAACAGGCAGCTGCAGACAGTCAACAACACTTCTCCTTTCAGCCTGGCG TGTGCTGATCTCATATAGGCGCCTTCTCCATGAACCTTACACCGTGTACATCATCAAG GGCTACTGGCCCCCTGGGCGCCGTGGTCTGCGACCTGTGGCTGGCCCTGGACTACGTGGTG AGCAACGCCTCCGTCATGAACCTTCTCATCATCAGCTTTGGCCGCTACTTCTGCGTCACC AAGCCTCTCACCTACCCTGCCGGCGCACCAAGATGGCAGGCCTCATGATTGCTGCT GCCTGGTACTGTCTTCGTGCTCTGGGCGCCTGCCATCTTGTCTGGCAGTTTGTGGTG GGTAAAGCGGACGGTGCCCGACAACCAAGTCTTCCAGTTTCTTCCAACCCAGCAGTG ACCTTTGGCACGGCCATTGCTGCCTTCTACCTGCCTGTGGTCATCATGACGGTGTGTAC ATCCACATCTCCCTGGCCAGTCGCAGCCGAGTCCACAAGCACCGCCCGAGGGCCCGANA GAGAAGAAAGCCAAGACGCTGGCCTTCTCAAGAGCCCCTAATGAAGCANAGCGTCAAGA AGCCCCCGCCCCGGGAGTCCNGCCTGGNNAGNAGCTGCGNCATGNNCAGCTNGNNAGAG GCCCCCCGNCAGCGCTGCCACCGCC
<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_000741 unedited CTTTCCNNAATACTGTGNACC GCGGCCGCTTACTAGATCGNAAGNCTTGAATCGGT ACCGAGCTCGGATCCACTATAACGGCCGCCATGTGCTGGAATTCGGCTTCTGCCTGCCT ACCTGGCAGTGCCGATGTTCCGATACTGGCACAGCAGCAGGTGCCGGAAGGTCTTTTTAA AGGTGGCGTTGCACAGAGCATAGCAGGCAGGGTTGATAGTGTGTGACGTAGCAGAGCC AGTAGCCAATGGACCACACCGTGTGAGGATGCAGCTCTGGCAGAAGGTGTTACCAGGA CCATGACGTTGTAGGGCGTCCAGGTGAGGATGAAGGCTAGCAGAATGGCAAAGATCGTTC GTGCACTTTGCGCTCCCGGGCCGCCATCTGCCGCTTCTTGCACCTGGTTGCGAGCGA TGCTGGCGAACTTGC GGCCACGTTGGCCGAGGGCGCATGCCAGCCGGCGTGGCAGGCA CAATCTCAATGGCTGTACACACTCATTGCCTGTCTGCTTCGTACAATCTGGATCTTGG ACCATCTGGAGGCTGGGTTGAGGGCCCGCGCTGCAGGGGAGGGGCGGGCATGGCGGGCG TGGTGGCCTCTGTGGTGGACAGCTCTGTGGCTGGGCGTTCCTTGGTGTCTGGGTGGCAC TGCTGAGCTGGACTCATTGGAAGTGTCTTATCANCCAGGGGCGGGTGGCGGTGGCA GCGCTGGCGGGGGGCCCTCCAGCTTGCCATTGCCAACTCCTCCCGGGCGGCCCTCC GGGCGGGGCGCTCTTTGACCCCTTGTTCATTAATGGGCTCTTTGAGAAGGCCACGGTTT TGGTTTTTCTTCTCCGCGCCCTCGGCCGGTGTGGGACTCG
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_000741
<b>Insert Size:</b>	1550 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).

**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\\_000741.2](#), [NP\\_000732.2](#)

**RefSeq Size:** 1468 bp

**RefSeq ORF:** 1440 bp

**Locus ID:** 1132

**UniProt ID:** [P08173](#)

**Cytogenetics:** 11p11.2

**Protein Families:** Druggable Genome

**Protein Pathways:** Neuroactive ligand-receptor interaction, Regulation of actin cytoskeleton

**Gene Summary:** The muscarinic cholinergic receptors belong to a larger family of G protein-coupled receptors. The functional diversity of these receptors is defined by the binding of acetylcholine and includes cellular responses such as adenylate cyclase inhibition, phosphoinositide degeneration, and potassium channel mediation. Muscarinic receptors influence many effects of acetylcholine in the central and peripheral nervous system. The clinical implications of this receptor are unknown; however, mouse studies link its function to adenylyl cyclase inhibition. [provided by RefSeq, Jul 2008]