

## Product datasheet for **RC214127**

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Muscarinic Acetylcholine Receptor M4 (CHRM4) (NM_000741) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Muscarinic Acetylcholine Receptor M4
Synonyms:	HM4; M4R
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC214127 representing NM\_000741  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCAACCTCACACCTGTCAATGGCAGCTCGGGAATCAGTCCGTGCGCTGGTCACGTCATCATCCC  
 ACAATCGCTATGAGACGGTGAAATGGTCTTCATTGCCACAGTGACAGGCTCCCTGAGCCTGGTGACTGT  
 CGTGGGCAACATCCTGGTGATGCTGTCCATCAAGGTCAACAGGCAGCTGCAGACAGTCAACAACACTTCT  
 CTCTTCAGCCTGGCGTGTGCTGATCTCATCATAGGCGCCTTCTCCATGAACCTCTACACCGTGATACATCA  
 TCAAGGGCTACTGGCCCTGGGCGCGTGGTCTGCGACCTGTGGCTGGCCCTGGACTACGTGGTGAGCAA  
 CGCCTCCGTATGAACCTTCTCATCATCAGCTTGGCCGCTACTTCTGCGTCAACAAGCCTCTCACCTAC  
 CCTGCCGGCGCACCAAGATGGCAGGCCTCATGATTGCTGCTGCCTGGTACTGTCTTCGTGCTCT  
 GGGCGCCTGCCATCTTGTCTGGCAGTTTGTGGTGGGTAAGCGGACGGTCCCGACAACCAAGTGTTCAT  
 CCAGTTCTGTCCAACCCAGCAGTGACCTTGGCACGGCCATTGCTGCCTTCTACCTGCCTGTGGTCATC  
 ATGACGGTGTGTACATCCACATCTCCCTGGCCAGTGCAGCCGAGTCCACAAGCACCGGCCGAGGGCC  
 CGAAGGAGAAGAAAGCCAAGACGCTGGCCTTCCCTCAAGAGCCACTAATGAAGCAGAGCGTCAAGAAGCC  
 CCCGCCGGGGAGGCCGCCCGGGAGGAGCTGCGCAATGGCAAGCTGGAGGAGGCCCGCCCGCCAGCGCTG  
 CCACCGCCACCGCGCCCGTGGCTGATAAAGGACTTCCAATGAGTCCAGCTCAGGCAGTGCCACCCAGA  
 ACACCAAGGAACGCCAGCCACAGAGCTGTCCACCACAGAGGCCACCACGCCCGCATGCCCGCCCTCC  
 CCTGCAGCCGCGGGCCCTCAACCCAGCCTCCAGATGGTCCAAGATCCAGATTGTGACGAAGCAGACAGGC  
 AATGAGTGTGTGACAGCCATTGAGATTGTGCTGCCACGCCGGTGGCATGCGCCCTGCGGCCAACGTGG  
 CCCGCAAGTTCGCCAGCATCGCTCGCAACCAGGTGCGCAAGAAGCGGCAGATGGCGCCCGGGAGCGCAA  
 AGTGACACGAACGATCTTTGCCATTCTGCTAGCCTTCTCATCTCACCTGGACGCCCTACAACGTCATGGTC  
 CTGGTGAACACCTTCTGCCAGAGCTGCATCCCTGACACGGTGTGGTCCATTGGCTACTGGCTCTGCTACG  
 TCAACAGCACTATCAACCCTGCCTGCTATGCTCTGTGCAACGCCACCTTAAAAAGACCTTCCGGCACCT  
 GCTGCTGTGCCAGTATCGGAACATCGGCACTGCCAGG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC214127 representing NM\_000741  
 Red=Cloning site Green=Tags(s)

MANFTPVNGSSGNQSVRLVTSSSHNRYETVEMVFIATVTGSLSLVTVVGNILVMLSIVKVNRLQTVNNYF  
 LFSLACADLIIGAFSMNLYTVYIIKGYWPLGAVVCDLWLALDYVSNASVMNLLIISFGRYFCVTKPLTY  
 PARRTTKMAGLMIAAAWVLSFVLWAPAILFWQFVVGKRTVPDNQCFIQFLSNPAVTFGTAAAFYLPVVI  
 MTVLYIHIISLASRSRVHKHRPEGPKEKAKTLAFLKSPLMKQSVKKPPPGEAAREELRNGKLEEAPPPAL  
 PPPRPVADKDTSNSSSGSATQNTKERPATELSTTEATTPAMPAPPLQPRALNPASRWSKIQIVTKQTG  
 NECVTAIEIVPATPAGMRPAANVARKFASIARNQVRKKRQMAARERKVTRTIFAILLAFILTWTPYNVMV  
 LVNTFCQSCIPDVTWSIGYWLVCYNSTINPACYALCNATFKKTRHLLLCQYRNIGTAR

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6112\\_h09.zip](https://cdn.origene.com/chromatograms/mk6112_h09.zip)

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_000741

ORF Size: 1437 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\\_000741.5](#)

RefSeq Size: 1468 bp

RefSeq ORF: 1440 bp

Locus ID: 1132

UniProt ID: [P08173](#)

Cytogenetics: 11p11.2

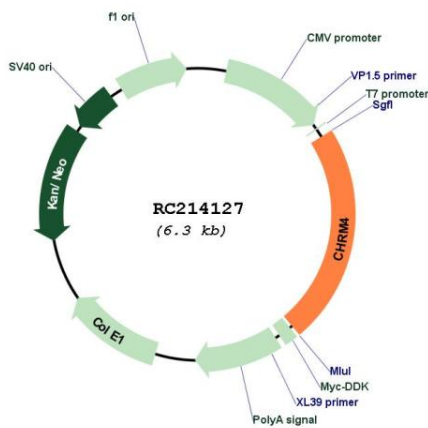
**Protein Families:** Druggable Genome

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

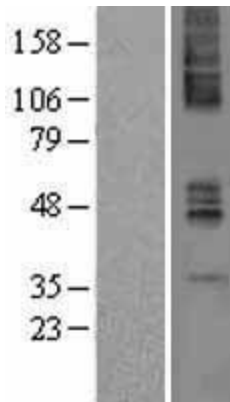
**MW:** 52.9 kDa

**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]

**Product images:**



Circular map for RC214127



Western blot validation of overexpression lysate (Cat# [LY400245]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214127 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).