

## Product datasheet for MR225777

### Mc4r (NM\_016977) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mc4r (NM_016977) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mc4r
Synonyms:	Fatb; Mc4-r; Pk; Pkcp
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR225777 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAACTCCACCCACCACCATGGCATGTATACTCCCTCCACCTCTGGAACCGCAGCAGCTACGGGCTGC  
ACGGCAATGCCAGCGAGTCGCTGGGGAAGGGCCACCCGGACGGAGGATGCTATGAGCAACTTTTTGTTTC  
CCCCGAGGTGTTGTGACTCTGGGTGCATAAGCCTGTTGGAGAATTCTAGTGATCGTGGCGATAGCC  
AAGAACAAGAACCTGCACTCACCATGTACTTTTTCATCTGTAGCCTGGCTGTGGCAGATATGCTGGTGA  
GCGTTTCGAATGGGTCGGAACCATCGTCATTACCTGTTAAACAGTACGGATACGGATGCCAGAGCTT  
CACCGTGAACATTGATAATGTCATTGACTCTGTGATCTGTAGCTCCTTGCTCGCATCCATTTGCAGCCTG  
CTTTCCATTGCGGTGGACAGGATTTTCACTATCTTTTACGCGCTCCAGTACCATAACATCATGACGGTTA  
GGCGGGTCCGGATCATCATAAGTTGTATCTGGGCAGCTTGCACTGTGTCAGGCGTCTCTTCATCATTTA  
CTCGGACAGCAGCGCTGTATCATCTGCCTCATTTCCATGTTCTTCACTATGCTAGTTCTCATGGCCTCT  
CTCTATGTCCACATGTTCTGATGGCGAGGCTTACATTAAGAGGATTGCTGTCTCCAGGCACAGGGA  
CCATCCGCCAGGTTACCAACATGAAGGGGGCGATTACCTTGACCATCCTGATTGGAGTCTTTGTTGTCTG  
CTGGGCCCCGTTCTTTCTCCATTTACTGTTCTACATCTCTTGCCTCAGAATCCATACTGCGTGTGCTTC  
ATGTCTCATTTTAAATTTGTATCTCATACTGATCATGTGTAACGCCGTCATCGACCCTCTCATTTATGCC  
TCCGGAGTCAAGAACTGAGGAAAACCTTCAAGAGATCATCTGTTTCTATCCTCTGGGAGGCATCTGTGA  
GTTGTCTAGCAGGTAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR225777 protein sequence  
Red=Cloning site Green=Tags(s)

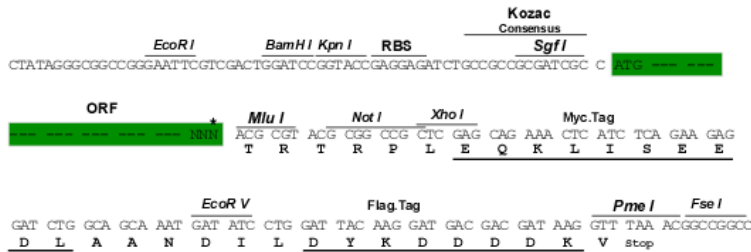
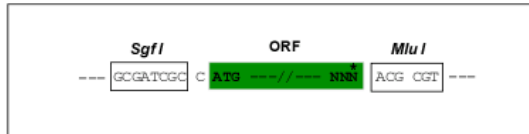
MNSTHHHGMYSLHLWNRSSYGLHGNASESLGKGHPDGGCYEQLFVSPEVFTLVGISLLENILVIVAIA  
 KNKNLHSPMYFFICSLAVADMLVSVSNGSETIVITLLNSTDTDAQSFTVNIDNVIDSVICSSLLASICSL  
 LSIADVRYFTIFYALQYHNIMTVRRVGIISCIWAACTVSGVLFIIYSDSSAVIICLISMFFTMLVLMAS  
 LYVHMFLMARLHIKRIAVLPGTGTIRQGTNMKGAITLTILIGVFFVVCWAPFFLHLLFYISCPQNPYCVCF  
 MSHFNLYLILIMCNAVIDPLIYALRSQELRKTfKEIICFYPLGGICESSRY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_016977

**ORF Size:** 999 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\\_016977.4](#)

**RefSeq Size:** 2783 bp

**RefSeq ORF:** 999 bp

**Locus ID:** 17202

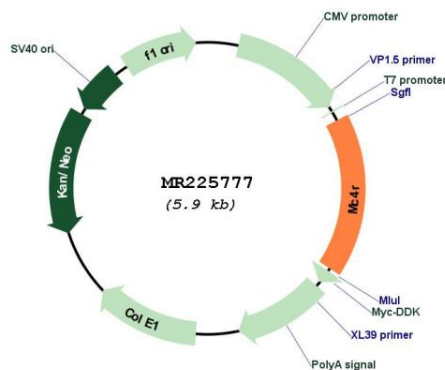
**UniProt ID:** [P56450](#)

**Cytogenetics:** 18 E1

**MW:** 37 kDa

**Gene Summary:** This gene encodes a member of the melanocortin receptor family. Melanocortin receptors are transmembrane G-protein coupled receptors, which respond to small peptide hormones and exhibit diverse functions and tissue type localization. As part of the central nervous melanocortin system, the encoded protein is competitively bound by either melanocyte stimulating hormone or agouti-related protein to regulate energy homeostasis. Disruption of this gene promotes hyperphagia and obesity, and is associated with increased cholesterol levels and insulin resistance. [provided by RefSeq, Dec 2012]

### Product images:



Circular map for MR225777