

## Product datasheet for **MR224603**

### Mrap2 (NM\_001101482) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Mrap2 (NM\_001101482) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Mrap2  
**Synonyms:** BB633055  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR224603 representing NM\_001101482  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGATGTCTGCCAGAGGCTGGCTTCTAACAGGACATCCCCACAGTCACCATCGAACTCTGACTACA  
CCTGGGAATACGAGTACTATGAGATCGGACCAGTTTCCTTTGAAGGACTGAAGGCTCATAAATATCCAT  
TGTGATTGGATTCTGGTTGGTCTTGCCTTTGTGATTTTCATGTTTTTGTGCTGACTTTGCTGACG  
AAGACAGGTGCCACACCAAGACAACGCGGAGTCCCTCAGAGAGGAGTCCGCATGAACAGCTTTGTGT  
CAGACTTCGGGAAGCCGCTGGAGTCAGACAAGGTGTTTTCTCGTCAGGGCAACGAGGAGTCCAGGTCTCT  
GTTCCACTGTTACATCAATGAAGTAGAACACTTGACAGGGTTAAAGTTTGCCACCAAAACAGCCATC  
GACAGTGTGTCACCTCCAGGAAGCCAGCAGAAGCAGTGGGAGGCCGAGGAGGAGCTAGCCAGGTTCA  
TGAAGTTTGACATCCCCAACTTTGTGAACAGAGCAGAGCTCCTTTGGGGAGGATGATCTCCTGATTTT  
GGAAGCACCCGTTCTTCTAGAAAACAAGCCAGTTCCAGACATCACGCATAGACCTGGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR224603 representing NM\_001101482  
Red=Cloning site Green=Tags(s)

MEMSAQRLASNRTPSPNSDYWEYEEYIIGPVSFEGKKAHKYSIVIGFWVGLAVFVIFMFFVLLTLLT  
KTGAPHQDNAESSERRFRMNSFVSDFGKPLESDKVFVSRQNEESRSLFHCYINEVEHLDRVKVCHQTTAI  
DSDVHLQEASRSSGRPEEELARFMKFDIPNFVNTEQSSFGEEDLLISEAPVLLNKPVSQTSRIDLD

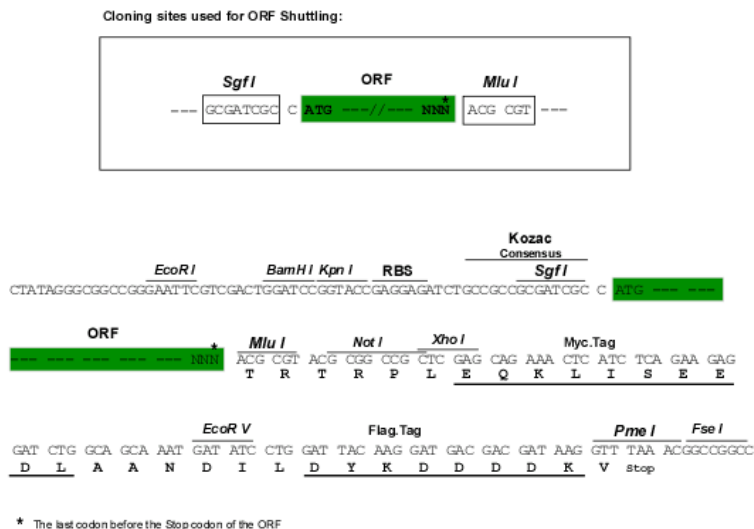
**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV



**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9025\\_b11.zip](https://cdn.origene.com/chromatograms/mm9025_b11.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001101482

**ORF Size:** 621 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\\_001101482.2](#), [NP\\_001094952.2](#)

**RefSeq Size:** 1948 bp

**RefSeq ORF:** 624 bp

**Locus ID:** 244958

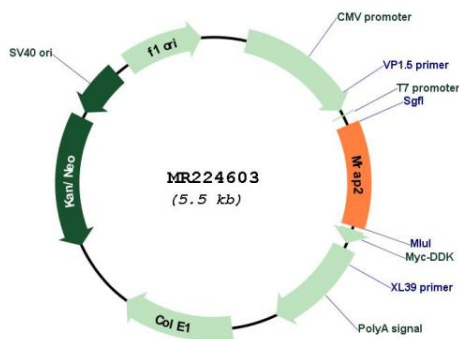
UniProt ID: [D3Z1Q2](#)

Cytogenetics: 9 E3.1

MW: 24.1 kDa

**Gene Summary:** Modulator of melanocortin receptor 4 (MC4R), a receptor involved in energy homeostasis. Plays a central role in the control of energy homeostasis and body weight regulation by increasing ligand-sensitivity of MC4R and MC4R-mediated generation of cAMP. May also act as a negative regulator of MC2R: competes with MRAP for binding to MC2R and impairs the binding of corticotropin (ACTH) to MC2R. May also regulate activity of other melanocortin receptors (MC1R, MC3R and MC5R); however, additional evidence is required in vivo. [UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR224603