

Product datasheet for **MG223243**

Mrap2 (NM_001177731) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Mrap2 (NM_001177731) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Mrap2
Synonyms: BB633055
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG223243 representing NM_001177731
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGAGATGTCTGCCAGAGGCTGGCTTCTAACAGGACATCCCCACAGTCACCATCGAACTGACTACA
 CCTGGGAATACGAGTACTATGAGATCGGACCAGTTTCTTTGAAGGACTGAAGGCTCATAAATATCCAT
 TGTGATTGGATTCTGGGTGGTCTTGCCTTTGTGATTTTCATGTTTTTGTGCTGACTTTGCTGACG
 AAGACAGGTGCCACACCAAGACAACCGGAGTCTCAGAGAGGAGTTCCGCATGAACAGCTTTGTGT
 CAGACTTCGGGAAGCCGCTGGAGTCAGACAAGGTTTTTCTCGTCAGGGCAACGAGGAGTCCAGGTCTCT
 GTTCCACTGTTACATCAATGAAGTAGAACACTTGACAGGGTTAAAGTTTCCACCAAAACAGCCATC
 GACAGTGTGTCACCTCCAGGAAGCCAGCAGAAGCAGTGGGAGGCCGAGGAGGAGTACCCAGGTTCA
 TGAAGTTTGACATCCCCAACTTTGTGAACACAGAGCAGAGCTCCTTTGGGGAGGATGATCTCCTGATTT
 GGAAGCACCCGTTCTTCTAGAAAACAAGCCAGTTTCCAGACATCACGCATAGACCTGGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

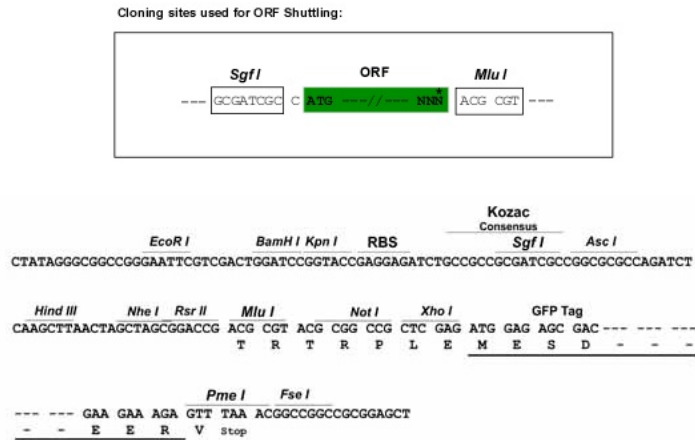
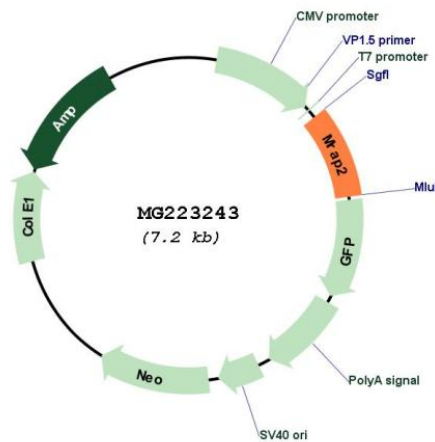
Protein Sequence: >MG223243 representing NM_001177731
 Red=Cloning site Green=Tags(s)

MEMSAQRLASNRTPSQSPNSDYTWEEYEEIGPVSFEGFLKAHKYSIVIGFWVGLAVFVIFMFFVLTLLT
 KTGAPHQDNAESSERRFRMNSFVSDFGKPLESDKVFSRQNEESRSLFHCYINEVEHLDRVKVCHQTTAI
 DSDVHLQEASRSSRPEEELARFMKFDIPNFVNTEQSSFGEEDLLISEAPVLEENKPVSTSRIDL

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI



Cloning Scheme:

Plasmid Map:


ACCN: NM_001177731

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_001177731.1](#), [NP_001171202.1](#)

RefSeq Size: 2093 bp

RefSeq ORF: 624 bp

Locus ID: 244958

UniProt ID: [D3Z1Q2](#)

Cytogenetics: 9 E3.1

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]