

## Product datasheet for **MG223217**

### **Msx2 (NM\_013601) Mouse Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Msx2 (NM\_013601) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Msx2  
**Synonyms:** BB122635; Hox-8; Hox8; Hox8.1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG223217 representing NM\_013601  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCTTCTCCGACTAAAGGCGGTGACTTGTTTTCGTCGGATGAGGAGGGCCCCGCGTACTGGCCGGCC  
 CGGGTCTGGCCTGGAGGAGCCGAGGGCAGCGCAGAGGAGCGCAGGGTCAAGGTCTCCAGCCTGCCCTT  
 CAGCGTGGAGGCGCTCATGTCCGACAAGAAGCCGCCCAAGGAATCGCCCGCGGTGCCACCCGACTGCGCC  
 TCGGCTGGCGCTGCTCGCGCCGCTGCTGCTGCCGGACACGGCGTCCGGGACGCTCACAGTCCCGGGC  
 CTCTCGTCAAGCCCTTCGAGACCGCTCGGTCAAGTCGGAATAATCCGAAGACGGAGCACCGTGGATACA  
 GGAGCCCGGCAGATACTCCCGCCGCCAGACATATGAGCCCCACCACCTGCACCCTGAGGAAACACAAG  
 ACCAACCGGAAGCCACGCACACCCTTACCACATCCCAGCTTCTAGCCTTGGAGCGCAAGTTCGCCGAGA  
 AACAGTACCTGTCCATAGCAGAGCGGGCTGAGTTCTCCAGCTCTCTGAACCTTACAGAGACCCAGGTCAA  
 AATCTGGTTCCAGAACCGAAGGGCTAAGGCGAAAAGACTGCAAGAGGCGGAACTGGAAAAGCTGAAAATG  
 GCTGCCAAGCCTATGCTGCCCTCAGGCTTCAGTCTGCCCTTCCCTATCAACTCACCCCTGCAAGCAGCAT  
 CCATATACGGCGCATCTACCCCTTCCACAGACCTGTGCTCCCATCCCGCTGTGGACTCTATGCCAC  
 GCCGGTTGGATATGGCATGTACCATCTATCC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA



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**Protein Sequence:** >MG223217 representing NM\_013601  
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MASPTKGGDLFSSDEEGPAVLGPGPGGGAEGSAEERRVKVSSLPFVEALMSDKKPKESPAPPPDCA  
 SAGAVLRPLLLPGHGVRDAHSPGPLVKPFETASVKSENEDGAPWIQEPGRYSPPPRHMSPTTCTLRKHK  
 TNRKPRTPFTTSQLLALERKFRQKQYLSIAERAEFSSSLNLTTETQVKIWFQNRRAKAKRLQEALEKLM  
 AAKPMLPSGFSLPFPINSPLQAASIYGASYPFHRPVLPIPPVGLYATPVGYGMYHLS

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_013601

**ORF Size:** 801 bp

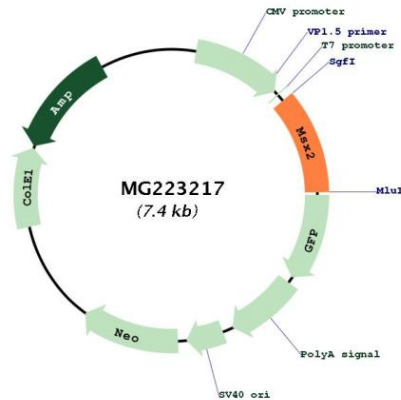
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_013601.2](#), [NP\\_038629.2](#)
- RefSeq Size:** 2162 bp
- RefSeq ORF:** 804 bp
- Locus ID:** 17702
- UniProt ID:** [Q03358](#)
- Cytogenetics:** 13 27.84 cM
- Gene Summary:** Acts as a transcriptional regulator in bone development. Represses the ALPL promoter activity and antagonizes the stimulatory effect of DLX5 on ALPL expression during osteoblast differentiation. Probable morphogenetic role. May play a role in limb-pattern formation. In osteoblasts, suppresses transcription driven by the osteocalcin FGF response element (OCFRE). Binds to the homeodomain-response element of the ALPL promoter. [UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG223217