

## Product datasheet for **MG227417**

### Mbp (NM\_010777) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mbp (NM_010777) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mbp
Synonyms:	C76307; goll; golli-mbp; Hmb; Hmbpr; jv; jve; mld; R75289; shi
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG227417 representing NM_010777 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGAACCACTCTGGAAAGAGAGAATTATCTGCTGAGAAGGCCAGTAAGGATGGAGAGATTCACCGAG  
GAGAGGCTGGAAAGAAGAGAAGCGTGGCAAGCTTCTCAGACGGCCTCAGAGGACAGTGATGTGTTTGG  
GGAGGCAGATGCGATCCAGAACAATGGGACCTCGGCTGAGGACACGGCGGTGACAGACTCCAAGCACACA  
GCAGACCCAAAGAATAACTGGCAAGGCGCCACCCAGCTGACCCAGGGAACCGCCCCACTTGATCCGCC  
TCTTTTCCGAGATGCCCGGGAAGGGAGACAACACCTTCAAAGACAGGCCCTCAGAGTCCGACGAGCT  
TCAGACCATCCAAGAAGACCCACAGCAGCTTCCGGAGGCCTGGATGTGATGGCATCACAGAAGAGACCC  
TCACAGCGATCCAAGTACCTGGCCACAGCAAGTACCATGGACCATGCCAGGCATGGCTTCTCCCAAGGC  
ACAGAGACACGGGCATCCTTGACTCCATCGGGCGCTTCTTTAGCGGTGACAGGGGTGCGCCCAAGCGGGG  
CTCTGGCAAGGACTCACACACGAGAACTACCCATTATGGCTCCCTGCCCCAGAAGTCGCAGCACGGCCGG  
ACCCAAGATGAAAACCCAGTAGTCCATTTCTTCAAGAATTGTGACACCTCGAACACCCTCCATCCC  
AAGGGAAGGGAGGAAGAGACAGCCGCTCTGGATCTCCATGGCGAGACGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG227417 representing NM\_010777  
 Red=Cloning site Green=Tags(s)

MGNHSGKRELSAEKASKDGEIHRGEAGKKRSVGKLSQTASESDVFGADAIQNNGTSAEDTAVTDSKHT  
 ADPKNNWQGAHPADPGNRPHLIRLF SRDAPGREDNTFKDRPSEDELQTIQEDPTAASGGLDVMASQKRP  
 SQRSKYLATASTMDHARHGFLPRHRDTGILDSIGRFFSGDRGAPKRGSGKDSHTRTTHYGSLPQKSQHGR  
 TQDENPVVHFFKNIVTPRTPPPSQGKGGDRSRSGSPMARR

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**ACCN:** NM\_010777

**ORF Size:** 750 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\\_010777.3](#), [NP\\_034907.1](#)

**RefSeq Size:** 2531 bp

**RefSeq ORF:** 753 bp

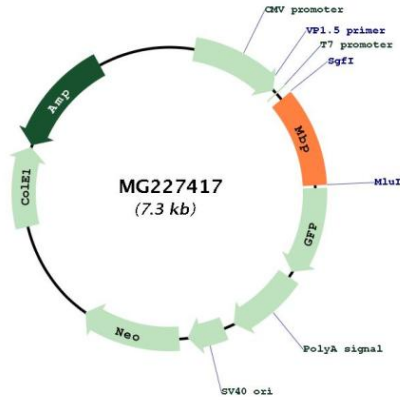
**Locus ID:** 17196

**UniProt ID:** [P04370](#)

**Cytogenetics:** 18 55.84 cM

**Gene Summary:** The protein encoded by the classic Mbp gene is a major constituent of the myelin sheath of oligodendrocytes and Schwann cells in the nervous system. However, Mbp-related transcripts are also present in the bone marrow and the immune system. These mRNAs arise from the long Mbp gene (otherwise called "Golli-Mbp") that contains 3 additional exons located upstream of the classic Mbp exons. Alternative splicing from the Golli and the Mbp transcription start sites gives rise to 2 sets of Mbp-related transcripts and gene products. The Golli mRNAs contain 3 exons unique to Golli-Mbp, spliced in-frame to 1 or more Mbp exons. They encode hybrid proteins that have N-terminal Golli aa sequence linked to Mbp aa sequence. The second family of transcripts contain only Mbp exons and produce the well characterized myelin basic proteins. This complex gene structure is conserved among species suggesting that the Mbp transcription unit is an integral part of the Golli transcription unit and that this arrangement is important for the function and/or regulation of these genes. Mutation of the Mbp gene is associated with the 'shiverer' and 'myelin deficient' phenotypes in mouse. [provided by RefSeq, Jul 2008]

Product images:



Circular map for MG227417