

## Product datasheet for **SC302349**

### Myelin Basic Protein (MBP) (NM\_001025101) Human Untagged Clone

#### Product data:

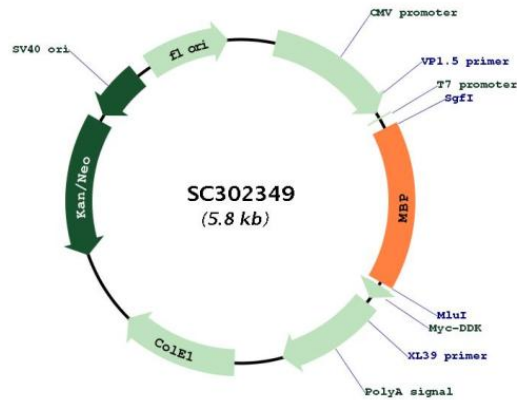
Product Type:	Expression Plasmids
Product Name:	Myelin Basic Protein (MBP) (NM_001025101) Human Untagged Clone
Tag:	Tag Free
Symbol:	MBP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC302349 representing NM_001025101. Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGGAAACCACGCAGGCAAACGAGAATTAATGCCGAGAAGGCCAGTACGAATAGTGAACTAACAGA
GGAGAATCTGAAAAAAGAGAAACCTGGGTGAACCTTTCACGGACAACCTCAGAGGACAACGAAGTGTTT
GGAGAGGCAGATGCGAACCAACAATGGGACCTCCTCTCAGGACACAGCGGTGACTGACTCCAAGCGC
ACAGCGGACCCGAAGAATGCCTGGCAGGATGCCACCCAGCTGACCCAGGGAGCCGCCCCCACTTGATC
CGCCTCTTTCCCGAGATGCCCGGGGAGGGAGGACAACACCTTCAAAGACAGGCCCTCTGAGTCCGAC
GAGCTCCAGACCATCCAAGAAGACAGTGCAGCCACCTCCGAGAGCCTGGATGTGATGGCGTCACAGAAG
AGACCCTCCAGAGGCACGGATCCAAGTACCTGGCCACAGCAAGTACCATGGACCATGCCAGGCATGGC
TTCTCCCAAGGCACAGAGACACGGCATCCTTGACTCCATCGGGCGCTTCTTTGGCGGTGACAGGGGT
GCGCCCAAGCGGGGCTCTGGCAAGGACTCACACCACCCGCAAGAAGTCTCACTACGGCTCCCTGCC
CAGAAGTCACACGGCCGGACCCAAGATGAAAACCCGTAGTCCACTTCTTCAAGAACATTGTGACGCT
CGCACACCACCCCGTCGCAGGGAAAGGGGAGAGGACTGTCCCTGAGCAGATTTAGCTGGGGGGCCGAA
GGCCAGAGACCAGGATTTGGCTACGGAGGCAGAGCGTCCGACTATAAATCGGCTCACAAGGGATTCAAG
GGAGTCGATGCCAGGGCAGCTTCCAAAATTTTAAAGCTGGGGAAGAGATAGTCGCTCGGATCA
CCCATGGCTAGACGCTGA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```

Restriction Sites: SgfI-MluI



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**Plasmid Map:**


**ACCN:** NM\_001025101

**Insert Size:** 915 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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_001025101.1](#)

**RefSeq Size:** 2794 bp

**RefSeq ORF:** 915 bp

**Locus ID:** 4155

**UniProt ID:** [P02686](#)

**Cytogenetics:** 18q23

**MW:** 33.1 kDa

**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. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (7) contains 3 exons unique to Golli-MBP and exons 1 and 3-7 of the classic MBP. It encodes the longer of the Golli-mbp isoforms (1).