

## Product datasheet for **MG211758**

### Prdm16 (BC059838) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Prdm16 (BC059838) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Prdm16
Synonyms:	5730557K01Rik; csp1; mel1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG211758 representing BC059838 Red=Cloning site Blue=ORF Green=Tags(s)

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ACGCGGCCGCTCGAG - GFP Tag - GTTAA

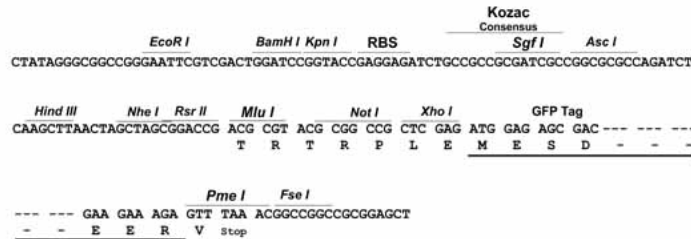
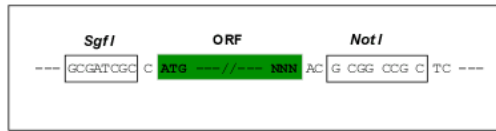
Protein Sequence: >MG211758 representing BC059838  
 Red=Cloning site Green=Tags(s)

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 GTSASSPTSESDNHALLDEKEDSYFSEIRNFIANSEMNASTRMDKRPEIQDLDNSNPPCPGSASAKPEDV  
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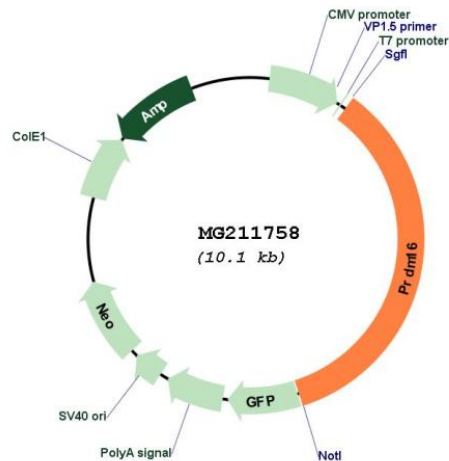
TRPLE - GFP Tag - V

Restriction Sites: SgfI-NotI  
 Cloning Scheme:

Cloning sites used for ORF Shuttling:



## Plasmid Map:



ACCN: BC059838

ORF Size: 3536 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: [BC059838](#), [AAH59838](#)

RefSeq Size: 4265 bp

RefSeq ORF: 3536 bp

Locus ID: 70673

Cytogenetics: 4 E2

**Gene Summary:**

Binds DNA and functions as a transcriptional regulator (PubMed:18483224). Displays histone methyltransferase activity and monomethylates 'Lys-9' of histone H3 (H3K9me1) in vitro (PubMed:22939622). Probably catalyzes the monomethylation of free histone H3 in the cytoplasm which is then transported to the nucleus and incorporated into nucleosomes where SUV39H methyltransferases use it as a substrate to catalyze histone H3 'Lys-9' trimethylation (PubMed:22939622). Likely to be one of the primary histone methyltransferases along with MECOM/PRDM3 that direct cytoplasmic H3K9me1 methylation (PubMed:22939622). Functions in the differentiation of brown adipose tissue (BAT) which is specialized in dissipating chemical energy in the form of heat in response to cold or excess feeding while white adipose tissue (WAT) is specialized in the storage of excess energy and the control of systemic metabolism (PubMed:17618855, PubMed:18483224). Together with CEBPB, regulates the differentiation of myoblastic precursors into brown adipose cells (PubMed:18719582, PubMed:19641492). Functions as a repressor of TGF-beta signaling. [UniProtKB/Swiss-Prot Function]