

Product datasheet for **MG208777**

Mettl16 (NM_026197) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mettl16 (NM_026197) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mettl16
Synonyms:	2610100D03Rik; 2810013M15Rik; A830095F14Rik; AI846133; Mett10d
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208777 representing NM_026197
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCTCTAAGCAAATCAATGCATGCAAGAAATAGATACAAGGACAAACCACTGACTTCGCATATCTGG
 CATCTAAATATCCAGATTTTAAGCAGCATATTCAGATAAATCTGAATGGGAGAGTAAGTCTTAATTTTAA
 AGACCCCGAAGCAGTCAGAGCTCTGACTTGTACTCTCCTGAGAGAGGACTTTGGACTTTCTATTGATATT
 CCTTTGGAGAGACTAATCCACAGTCCCTTGAGACTTAACTATATTCCTGGGTAGAAGATTTGATTG
 GTCACCAGGATTCGGACAAAACACTCTCCGAAGAGGAATTGACATAGGTACTGGGGCATCTGCATCTA
 TCCCTTACTTGGAGCAACCTTAAATGGCTGGTATTTCTGGCAACAGAAGTGGATGATATGTGTTTCAAT
 TATGCCAAGAAAATGTAGAGCAGAATAACCTATCTGATCTCATTAAAGTGGTAAAAGTGCCGAGAAGA
 CACTCCTGATGGATGCGCTTAAGGAAGAGTCTGAGATAGTCTATGACTTCTGTATGTGCAACCTCCCTT
 TTTTGCCAACCAATTGGAAGCCAAGGGTGTAAATTCCTGGCAACAGAAGTGGATGATATGTGTTTCAAT
 AACACCGGGGGCATCACAGAGATTATGGCAGAAGGAGGTGAGCTAGAATTTGTCAAAAGGATCATCCATG
 ACAGTTTACAGCTCAAAAAAGGTTACGGTGGTATAGCTGTATGCTGGGAAAGAAATGCAGTCTGGCTCC
 ACTGAAGGAAGAGCTTAGAATCCAAGGGTTTCTAAAGTACCTTACAGAGTTTTGTGAGGGTCCGGACA
 ATGAGATGGGCCTTAGCTTGGAGTTTTATGATGATGTACAGTACCGTACCTCCAAGTAAACGAAGAA
 AATTAGAAAAGCCAAGGAAACCCATTACTTTTGTAGTGTGGAGTCTGTGATGAAAGAATTGTCTCTCAA
 AGCTTCATCTTTGGCTCCGAGACAGCGGAAGGCATAGTGGTTGTAACAACATGGATAGAAAAGATCCTG
 ACTGATCTGAAGTGAACATAAGCGAATTCCTGTGGAAGAGAAGAAGTTAGCCTTTTCTGACAGCCA
 TAGAAAACCTCTTGGATTCATTTAAGGCGAAGAGAAGAGAGCGAGTGAAGCAGCTGCGGGAGGTGCTCG
 GGCTCCTGAGGACGTCTCTTAGCCTTGAAGAGAGAAAAGTCCACTCCCAAAGAGCTGAGTAGTGGCCAA
 GACGTGGCCACAGCCCAAGAGAGTGCCTGTGTGGCTTGTATGTGCCGGGCGCGAGGCTGCTGCTG
 ATGGAGGCCATTGCCTCAGCCAGAAGTACTGTGCCAGGAGGAGACTCCCAGGCCACGGAGGATGAAAG
 GGATGAGGAAAGGGGAGGGATGGAGGCCATGGAAGTTGTAAAGGCTCCAGCAATGGAGCCAGGACGGA
 GAGGCTTCTGAGAAGGGGATCGCTGGATGGGGCGCCGACGCTACCTGTTTAAAGTGTGTTAGTCAACA
 TTAAGAAGGAAGCTGGCGATGCCGTGGTTGAAATGCATTGGGTTGAGGGCCAGAATAGGGATTTGATGAA
 CCAGCTTTCAGTACGTACGTAACCAATTTTGAGGCTTGTGCTAGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208777 representing NM_026197
 Red=Cloning site Green=Tags(s)

MALSKSMHARNRYKDKPPDFAYLASKYPDFKQHIQINLNGRVSLNFKDPEAVRALTCTLLREDFGLSIDI
 PLERLIPTVPLRLNYIHWVEDLIGHQSDKTTLRRGIDIGTGASCIYPLLGATLNGWYFLATEVDDMCFN
 YAKKNVEQNLSDLIKVVKVPQKTLMDALKEESEIVYDFCMCNPPFFANQLEAKGVNSRNSRPPSSV
 NTGGITEIMAEGGELEFVKRIIHDSLQLKKRLRWYSCMLGKKCSLAPLKEELRIQGVPKVTFTEFCQGR
 MRWALAWSFYDDVTVPSPSKRRKLEKPRKPIFVVLESVMKELSLKASSLGSETAEGIVVVTWIEKIL
 TDLKVQHKRIPCREEVSLFLTAIENSWIHLRRRRRVRQLREVPRAPEDVILALEERKSTPKELSSGQ
 DVAHSPQESALCGLDVPGGEEAADGGHCLSQKLLCQEE TPEATEDERDEERGMEAMESCKGSSNGAODG
 EASEKGDRLDGAAGRYL FKCLVNIKKEAGDAVEMHWVEGQNRDLMNQLCTYVRNQILRLVAS

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

ACCN:	NM_026197
ORF Size:	1659 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:	<ol style="list-style-type: none">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_026197.3
RefSeq Size:	2720 bp
RefSeq ORF:	1662 bp
Locus ID:	67493
UniProt ID:	Q9CQG2
Cytogenetics:	11 B5

Gene Summary:

RNA N6-methyltransferase that methylates adenosine residues at the N(6) position of a subset of RNAs and is involved in S-adenosyl-L-methionine homeostasis by regulating expression of MAT2A transcripts (PubMed:29262316, PubMed:30197299). Able to N6-methylate a subset of mRNAs and U6 small nuclear RNAs (U6 snRNAs) (By similarity). In contrast to the METTL3-METTL14 heterodimer, only able to methylate a limited number of RNAs: requires both a 5'UACAGAGAA-3' nonamer sequence and a specific RNA structure (By similarity). Plays a key role in S-adenosyl-L-methionine homeostasis by mediating N6-methylation of MAT2A mRNAs, altering splicing and/or stability of MAT2A transcripts: in presence of S-adenosyl-L-methionine, binds the 3' UTR region of MAT2A mRNA and specifically N6-methylates the first hairpin of MAT2A mRNA, impairing MAT2A expression (PubMed:29262316, PubMed:30197299). In S-adenosyl-L-methionine-limiting conditions, binds the 3' UTR region of MAT2A mRNA but stalls due to the lack of a methyl donor, preventing N6-methylation and promoting expression of MAT2A (PubMed:29262316). In addition to mRNAs, also able to mediate N6-methylation of U6 small nuclear RNA (U6 snRNA): specifically N6-methylates adenine in position 43 of U6 snRNAs (By similarity). Also able to bind various lncRNAs (By similarity). Specifically binds the 3'-end of the MALAT1 long non-coding RNA (By similarity) (PubMed:29262316, PubMed:30197299).[UniProtKB/Swiss-Prot Function]