

## Product datasheet for **RG200925**

### **METTL14 (NM\_020961) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	METTL14 (NM_020961) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	METTL14
Synonyms:	hMETTL14
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG200925 representing NM\_020961  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGATAGCCGCTTGCAGGAGATCCGGGAGCGGCAGAAGTTACGGCGACAGCTCCTCGCGCAGCAGTTGG  
 GAGCTGAAAGTGCCGACAGCATTGGTGCCGTGTTAAATAGCAAAGATGAGCAGAGAGAAATTGCTGAAAC  
 AAGAGAAACTTGCAGGGCTTCTATGATACCTCTGCTCCAAATGCAAAACGTAAGTATCTGGATGAAGGA  
 GAGACAGATGAAGACAAAATGGAAGAATAAAGGATGAACTAGAAATGCAACAGGATGAAGAAAATTTGC  
 CATATGAAGAAGAGATTTACAAAGATTCTAGTACTTTTCTTAAGGGAACACAGAGCTTAAATCCCCATAA  
 TGATTACTGCCAACATTTGTAGACACTGGACATAGACCTCAGAATTTTCATCAGGGATGTAGTTTAGCT  
 GACAGATTTGAAGAATATCCTAACTGAGGGAGCTCATCAGGCTAAAGGATGAGTTAATAGCTAAATCTA  
 AACTCCTCCCATGTACTTACAAGCCGATATAGAAGCCTTTGACATCAGAGAACTAACACCCAAATTTGA  
 TGTGATCTTCTGGAACCCCTTTAGAAGAATATTACAGAGAACTGGCCTCACTGCTAATGAAAAATGC  
 TGGACTTGGGATGATATTATGAAGTTAGAAATTGATGAGATTGCAGCACCTCGATCATTTATTTTTCTCT  
 GGTGTGGTTCTGGGGAGGGGTTGGACCTTGAAGAGTGTGTTTACGAAAAATGGGGTTACAGAAGATGTGA  
 AGATATTTGTTGGATTAAAACCAATAAAAAACATCCTGGGAAGACTAAGACTTTAGATCCAAAGGCTGTC  
 TTTAGAGAACAAAGGAACACTGCCTCATGGGGATCAAAGGAAGCTGTGAAGCGTAGCACAGACGGGGACT  
 TCATTCATGCTAATGTTGACATTGACTTAATTATCACAGAAGAAGCTGAAATGGCAATATAGAAAAACC  
 TGTAGAAATTTTTCATATAATTGAGCATTTTGTCTTGGTAGAAGACGCCTTCATCTATTTGGAAGAGAT  
 AGTACAATTCGACCAGGCTGGCTCACAGTTGGACCAACGCTTACAATAGCAACTACAATGCAGAAAAAT  
 ATGCATCCTATTTCAAGTCTCTAATTCCTACTTGACTGGTTGTACAGAAGAAATGAGAGACTTCGACC  
 AAAATCGCCTCCTCCCAATCTAAATCTGACCGAGGAGGTGGAGCTCCAGAGGTGGAGGAAGAGGTGGA  
 ACTTCTGCTGGCGTGGACGAGAAAGAAATAGATCTAACTCCGAGGAGAAAGAGGTGGCTTTAGAGGGG  
 GCCGTGGAGGAGCACACAGAGGTGGCTTTCCACCTCGA

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG200925 representing NM\_020961  
 Red=Cloning site Green=Tags(s)

MDSRLQEIRERQKLRRQLLAQQLGAESADSIGAVLNSKDEQREIAETRETCRASYDTSAPNAKRKYLDEG  
 ETDEDKMEEYKDELEMQQDEENLPYEEEIYKDSSTFLKGTQSLNPHNDYCQHFVDTGHRPQNFIRDVGLA  
 DRFEYPKLRELIRLKDDELIAKSNTPPMYLQADIEAFDIRELTPKFDVILLEPPLEYYRETGITANEKC  
 WTWDDIMKLEIDEIAAPRSFIFLWCGSGEGLDLGRVCLRWGYRRCEDICWIKTNKNNPGKTKTLDPKAV  
 FQRTKEHCLMGIKGTVKRSTGDGFIHANVDIDLITTEEPEIGNIEKPVEIFHIEHFCLGRRRLHLFGRD  
 STIRPGWLVGPTLTNSNYNAETYASYFSAPNSYLTGCTEEIERLRPKSPPPKSKSDRGGGAPRGGGRGG  
 TSAGRGRERNRSNFRGERGGFRGGRGGAHRGGFPFR

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_020961

**ORF Size:** 1368 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\\_020961.4](#)

**RefSeq Size:** 2138 bp

**RefSeq ORF:** 1371 bp

**Locus ID:** 57721

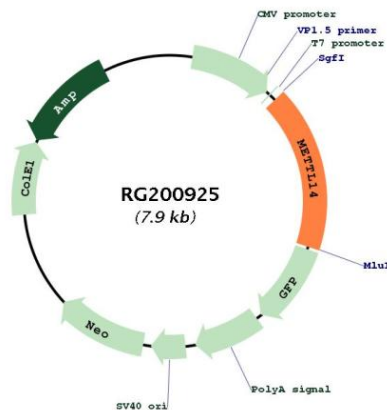
**UniProt ID:** [Q9HCE5](#)

**Cytogenetics:** 4q26

**Domains:** MT-A70

**Gene Summary:** The METTL3-METTL14 heterodimer forms a N6-methyltransferase complex that methylates adenosine residues at the N(6) position of some mRNAs and regulates the circadian clock, differentiation of embryonic stem cells and cortical neurogenesis (PubMed:24316715, PubMed:24407421, PubMed:25719671, PubMed:29348140, PubMed:27373337, PubMed:27281194). In the heterodimer formed with METTL3, METTL14 constitutes the RNA-binding scaffold that recognizes the substrate rather than the catalytic core (PubMed:27627798, PubMed:27373337, PubMed:27281194, PubMed:29348140). N6-methyladenosine (m6A), which takes place at the 5'-[AG]GAC-3' consensus sites of some mRNAs, plays a role in mRNA stability and processing (PubMed:24316715, PubMed:24407421, PubMed:25719671). M6A acts as a key regulator of mRNA stability by promoting mRNA destabilization and degradation (By similarity). In embryonic stem cells (ESCs), m6A methylation of mRNAs encoding key naive pluripotency-promoting transcripts results in transcript destabilization (By similarity). M6A regulates spermatogonial differentiation and meiosis and is essential for male fertility and spermatogenesis (By similarity). M6A also regulates cortical neurogenesis: m6A methylation of transcripts related to transcription factors, neural stem cells, the cell cycle and neuronal differentiation during brain development promotes their destabilization and decay, promoting differentiation of radial glial cells (By similarity).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for RG200925