

Product datasheet for **MC225038**

Tet2 (NM_001040400) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tet2 (NM_001040400) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Tet2
Synonyms:	Ayu17-449; E130014J05Rik; mKIAA1546
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC225038 representing NM_001040400 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAACAGGACAGAACCACCCATGCTGAGGGCACCAGACTGAGTCCATTCCTGATAGCACCACCTTCTC
CCATCAGCCATACAGAACCTCTGGCTGTCAAATCCAGAATGGAAGCCCGTTAGCAGAGAGACCTCATCC
AGAAGTAAATGGAGACACCAAGTGGCAATCTTCCAAAGCTGTTATGGAATATCCCATGAAAGGCAGC
CAGAGCAGTCATGAGAGTCCACATGAAGACAGAGGGTATTCAGGTGCTTACAGAATGGAGGATAAAAC
GCACAGTCAGTGAACCATCTCTCTGCGCTCCATCCAAACAAGATATTGAACTAGACCAAAAAGCTAA
GGGAGAAAAGCAATATCTTCGAGGAAAGCCAAGAAAGAAAACACCGTAAAAGCAGCCGTACGCCAAATGTC
TCCGGACTAAGTGATAATGGAGAGCCCGTGACCTCGACCACCCAGGAAAGTTGAGGTGCAGATGCTTTCC
CAACACGGAACACTACAATGGAGTTGAAATTCAGGTTCTCAACGAGCAGGAAGGGGAAAAAGGCAGGAGCGT
TACATTACTTAAAAACAAGATTGTGCTAATGCCTAATGGTGCTACAGTTTCTGCCATTCTGAGGAGAAC
ACACGTGGTGAACCTCTGGAAAAACACAGTGTATCCAGATTGTGTCTCCATTGCCGTGCAGAGTACCG
CATCTCATGTAACACCCCTAGCAGTCAGGCTGCTATCGAGTTGTCCACGAGATCCCTCAACCATCGT
TACCTCAGCGCAGATCAATTTCTCCAGACCTCAAGCTTGACGCTGCCTCCAGAGCCAGCTGCAATGGTG
ACTAAGCCTGTGATGCTGATAATGCCAGTAAACCAGCTATAGTACCAGTACCTGTCTTTTCAGAAAAG
CAGAACACCAACAAAAGTCAGCTTTGGACATAGGCCCATCTCGTCAGAAAACAAAACCATCCAAGGAAAG
CATGGAGCTATTTGCTGAAGAATACTATCCTAGTTCGACCGGAATTTGCAAGCTTCGCATGGCAGCTCT
GAACAGTATTCAAAGCAAAGGAAACCAATGGTGCTTACTTCAGGCAAAGCTCGAAGTTCCTCAAAGATT
CCATCTCTCCACTACTGTGACCCACCGTCACAATCACTTCTTGTCTCCCGTCTTGTCTTCAGCCTCC
TTTAGAAGGAAAAGGCGCTCTAAATGATGTAGCTTTGGAAGAACACCATGACTACCCCAACCGAAGCAAC
CGAACTCTTTAAGGGAAGGGAAAATAGACCATCAACCAAGACATCATCTAGCCAGAGTCTGAATCCAT
CTGTACATACACCAACCCCTTGTATGCTTCCAGAACAGCATCAGAATGATTGTGGCTACCGAGGCC
TGAAAAGTCAAGAAAATGTCAGAATATCTCATGTATTACCTGCCAAATCATGGCCACAGTGGAGTTTA



[View online »](#)

CAAGAACATAGCCAATACCTGATGGGGCACAGGGAGCAAGAGATTCGGAAGGATGCAAACGGGAAACAAA
CGCAAGGCTCTGTACAGGCAGCACCTGGCTGGATAGAAGTAAAGCCCGAATTTGCATGAAGCACTCCA
TCAGACAAAACGCAAGGATATATCCTTGCCTCAGTCTCCACTCTCAGACCCGGCCCTGTCAATCAGATG
AGCTCCAAACAGTCCACTGGCAATGTCAACATGCCAGGAGGATTCCAAAGGCTACCTTACCTCAGAAAA
CAGCCCAGCCAGAGCAGAAGGCACAAATGTACCAAGTGAAGTGAACCAAGGACCGTCTCCAGGTATGGG
GGACCAACATCTTCAGTTCAGAAAAGCTTTATACCAGGAGTGCATCCCCAGGACAGATCCGTCATCTGAG
GCTCACCCGCAAGCACCGAGCGTTCCCTCAGTATCATTTCAGCAAAAGAGTAAATCCCTCCAGTGATAAGC
ATTTGAGTCAACAGGCCACAGAGACTCAACGGTTATCAGGCTTTTACAACATACTCCTCAGACGCAAGC
ATCACAAACACCAGCATCCCAGAACTCAAATTTCCCTCAAATCTGCCAGCAGCAGCAGCAGCAGCAGTGA
CAGAGGAAGAATAAAGAGCAAATGCCTCAGACTTTCTCTCATCTCCAAGGTAGCAATGATAAGCAAAGAG
AAGGCTCGTGCTTTGGCCAGATTAAAGTGAAGAAAGCTTTTGTGTCGGAATCAGTACTCCAAATCAAG
TAATTTCCAAACTCACAATAATACCCAAGGGGGTGGAGCAAGTACAAAATAAATAAAAAATTTTCT
TATTCGAAGATCTTAACACCAAATTCGAGCAACTTACAGATTCTCCCTTCAAATGACACACACCCGGCTT
GTGAGCGGGAACAAGCTCTACATCCCGTAGGAAGTAAGACCTCAAACCTGCAGAACATGCAGTATTTCC
GAATAATGTGACCCCAAATCAGGACGTTACCGGTGCTTTTCAGGAACAAGCGCAGAAGCCTCAGCAAGCT
TCGTCTCTACAGGGGCTTAAGGACAGAAGCCAGGGTGAGTCTCCAGCCCCACCAGCTGAGGCAGCTCAAC
AGAGGTATTTGGTGCATAATGAAGCAAAGGCACCTCCCTGTGCCTGAGCAAGGAGGAAGTCAGACACAGAC
CCCTCCTCAGAAGGACACTCAGAAGCAGCTGCCTTAAGGTGGCTTCTCTTACAGAAGCAAGAACAGCAG
CAAACACAGCAATCCCAGCCTGGTCATAACCAGATGCTTAGGCCAATCAAGACTGAGCCTGTATCCAAAC
CTTCTTCTATAGATACCCCTTGTACCCGCCACAAGAAAATATGTCCAGCAGGATAAAGCAAAGAGATCTC
CTCTCCAAAGCCGTGACATGGGCAGCCAAAGAGCATCATTGAGACCATGGAACAGCACCTGAAGCAGTTT
CAGCTCAAGTCACTCTGTGACTATAAGGCTCTGACTCTCAAGTACAGAAAACACGTGAAAGTGCCAAACAG
ATATCCAGGCTGCAGAATCGGAGAACCAGCCCGAGCTGCAGAGCCTCAAGCAACCAAAGCAGATTTG
TTCTGTTCTCGACGATGTTTCAGAAATCAGATACCTCCTGGTGAACAAAGTCAAGTGGCAAATGTGAAGGA
TGCAATCCAGACAAGATGAAGCTCCTTATTATACCCATCTAGGAGCTGGTCTGATGTGCAGCTATTA
GAACACTCATGGAAGAAAGGTATGGAGAGAAGGGTAAAGCTATTAGGATTGAAAAAGTCATATACTGG
TAAAGAAGGCAAGAGCTCTCAGGGATGCTCTATTGCTAAATGGGTATATCGGAGATCGAGTGAGGAGGAG
AAACTACTGTGTTTGGTACGAGTGCACCTAATCACACATGTGAGACGGCGGTGATGGTAATTGCCATCA
TGTTGTGGGACGGAATCCCAAAGCTACTCGCATCAGAACTCTACTCAGAACTTACAGATATCTTGGGCAA
GTGTGGCATAATGCACCAACCGTCGCTGTTCTCAGAATGAAACTAGAAACTGTTGTTGTGAGGAGTGAAT
CCAGAGACCTGTGGTGCCTCCTTTCTTTGGTGTCTTGGAGCATGTACTATAATGGATGTAAGTTTG
CCAGAAGCAAGAAACCAAGGAAATTTAGGCTACATGGAGCTGAGCCAAAAGAGGAAGAGAGACTAGGTTT
TCATTTGCAAAACCTGGCTACTGTCTATTGCTCCAATATACAAGAAGCTTGACCCCGATGCATACAATAAT
CAGGTTGAATTTGAACACCAAGCCCCAGACTGCTGTTGGGTCTGAAGGAAGGCCGGCCATTCTCAGGAG
TCACTGCATGTTTGGACTTCTCTGCTCATTCCCACAGAGACCAGCAGAACATGCCAAATGGCAGTACAGT
GGTGGTCAACCTCAATAGAGAAGACAATCGAGAAGTCCGGAGTAAAGCCTGAGGATGAGCAGTTCACGTC
CTGCCTATGTACATCATCGCCCCGAGGATGAGTTGGGAGTACGGAAGGCCAGGAGAAGAAGATACGGA
TGGGTCCATTGAGGTTCTCAGTCAATTCGGAGGAGAAGGGTCAATAGGATAGGAGAGCTGCCAAAGAG
TTGCAAGAAGAAAAGCGGAGCCCAAGAAAGCCAAGACCAAGAAAGCAGCTCGAAAGCGTTCTCTGGAG
AACTGCTCCAGTAGGACTGAGAAGGGAAAGTCTTCTCACATACAAAGCTGATGGAAAATGCAAGCCATA
TGAACAATGACAGCACAACCGCAGCTTTTCGGGCCCGGTCTCCGGCAGCCACCAACACTCCAGAGGCA
CCTTCAGCAAGGGCAGAGGCCACAGCAGCCGACCCACCTCAGCCGACGCGCAGACGACACCTCAGCCA
CAGCCACAGCCACAGCATATCATGCCCGGTAACCTCAGTCTGTTGGTCTCATTGTTCTGGATCCACCA
GTGTCTACACGAGACAGCCTACTCCTCACAGTCTTATCCCAGCTCAGCACACACCTCAGATATTTATGG
AGATACCAACCATGTGAACCTTTACCCCACTTCTCATGCCTCGGTTTCAATTTGAATCCTTCTAAT
TACATGAACCCCTACCTTGGGCTTTTGAATCAGAATAACCAATATGCACCTTTTCCATACAATGGGAGTG
TGCCAGTGGACAATGGTTCCTTTCTTAGGTTCTTATCCCCCAGGCTCAGTCCAGGGATCTACATAG
ATATCAAACCCAGGACCATCTCACAATCAGAACTTACCACCCATCCACACCCCTTACCAACAGAGGTTT
GGGACAGTCCCTCTAAGTACTTAAGTTATGGAACCAAAAATATGCAGAGAGATGCCTTCTACTA
CCACCTAAAACCAAATGTACACCACCTAGCAACGTTTCTCCTTACCCACCCCAAGATGGATAGTCA
TTTCATGGGAGCTGCCTCCAGATCACCATACAGCCACCCACACTGACTACAAAACAGTGAAGCATCAT
CTACCCTCTCACAGATCTACAGCTACACGGCAGCAGCTTCGGGGAGCAGTTCAGCCACGCCTTCCACA

ACAAGGAGAATGACAACATAGCCAATGGGCTCTCAAGAGTGCTTCCAGGGTTTAATCATGATAGAACTGC
 TTCTGCCCAAGAACTATTATACAGTCTGACTGGCAGCAGTCAGGAGAAGCAGCCTGAGGTGTCAGGCCAG
 GATGCAGCTGCTGTGCAGGAAATTGAGTATTGGTCAGATAGTGAGCACAACCTTTCAGGATCCTTGCATTG
 GAGGGGTGGCTATAGCTCCAACCTCATGGGTCAATTCTTATTGAGTGTGCAAAGTGTGAGGTTTCATGCCAC
 AACCAAAGTAAACGATCCCGACCGGAATCACCCACCAGGATCTCACTTGTACTGTATAGGCATAAGAAT
 TTGTTTCTACAAAACATTGTTTGGCTCTCTGGGAAGCCAAAATGGCTGAAAAGGCCCGAAAGAGGAAG
 AGTGCGGAAAGAATGGATCAGACCACGTGTCTCAGAAAAATCATGGCAAACAGGAAAAGCGTGAGCCAC
 AGGGCCACAGGAACCCAGTTACCTGCGTTTCATCCAGTCTTGGCTGAGAACACAGGGTCTGTGACTACG
 GATTCTACCGTGACTACATCACCATATGCTTTCAGTCTCAGGTCACAGGGCCTTACAACACATTTGTATGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Chromatograms: https://cdn.origene.com/chromatograms/ja1827_g03.zip

Restriction Sites: Sgfl-Mlul

ACCN: NM_001040400

Insert Size: 5739 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 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](#)

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_001040400.2](#), [NP_001035490.2](#)

RefSeq Size: 9199 bp

RefSeq ORF: 5739 bp

Locus ID: 214133

UniProt ID: [Q4JK59](#)

Cytogenetics: 3 G3

Gene Summary: Dioxygenase that catalyzes the conversion of the modified genomic base 5-methylcytosine (5mC) into 5-hydroxymethylcytosine (5hmC) and plays a key role in active DNA demethylation. Has a preference for 5-hydroxymethylcytosine in CpG motifs. Also mediates subsequent conversion of 5hmC into 5-formylcytosine (5fC), and conversion of 5fC to 5-carboxylcytosine (5caC). Conversion of 5mC into 5hmC, 5fC and 5caC probably constitutes the first step in cytosine demethylation. Methylation at the C5 position of cytosine bases is an epigenetic modification of the mammalian genome which plays an important role in transcriptional regulation. In addition to its role in DNA demethylation, also involved in the recruitment of the O-GlcNAc transferase OGT to CpG-rich transcription start sites of active genes, thereby promoting histone H2B GlcNAcylation by OGT.[UniProtKB/Swiss-Prot Function]