

Product datasheet for **MC224802**

Tet3 (NM_183138) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Tet3 (NM_183138) Mouse Untagged Clone
Tag: Tag Free
Symbol: Tet3
Synonyms: B430006D22Rik; BC037432; D230004J03Rik
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Fully Sequenced ORF: >MC224802 representing NM_183138
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGACTCAGGGCCAGTGTACCATGGAGATTCAAGGCAGCTAAGCACCTCAGGGGCGCCGGTCAATGGTG
 CTAGAGAGCCCGCCGACCCGGTCTTCTGGGAGCTGCGGGTCTTGGCGGGTAGACCAGAAGCCCGACTG
 GGAGGCTGCCTCAGGCCCACTCAGCTGCTCGTCTGGAAGATGCCACGACCTGGTGGCCTTTTCGGCC
 GTGGCCGAAGCTGTGTCATTTACGGGGCCTTAGTACCCGGCTCTATGAAACCTCAACCGTGAGATGA
 GTCGTGAGGCTGGGAGCAACGGCAGGGGCCCCGGCCTGAGAGCTGCTCTGAGGGCAGTGAAGACCTGGA
 CACGCTGCAGACAGCCCTGGCCCTTGAAGGCATGGCATGAAACCACCAACTGCACCTGCGATGGCCCA
 GAGTGCCCGACTTCTCGAGTGGCTGGAGGGCAAGATCAAGTCTATGGCCATGGAGGGAGGGCAGGGGC
 GGCTAGGCTCCCAGGCGCTCTGCCTCCAGTGAAGGCTGGCCTCCAGCCCTAGCACCAGACCCGCACT
 CCTAGCTCTGAGGTCCCCAGGTACCTCCCCTGGAGGGCCTGCCTCTGTCCCAGAGCGCGCTGAGCATT
 GCCAAGGAAAAAATCAGCCTGCAGACAGCCATCGCCATCGAGGCCCTCACACAGCTCTCCTCCGCC
 TCCCTCAGCCTTCTCATTCCACCTCCAGGCTTCTGTCCACTCCCTGAGGCCTGTCCCCTTCTGCCCC
 TTTGAGGCTCTCCAGTCTACCTCCGGGCCCCCTCATGGCCTGTGGTTCCCCAGAGGAACATCCATCC
 TTTGCTCCTGACAGCCCAGCCTTCCCTCCAGCAACCCCAAGACCTGAGTTTTCTGAAGCGTGGGCACTG
 ACACCCCCAGCGACACCCGGAACCTCGCCTGTACCTCGCCCAAGCCCTGACCCTATGGCAGAAT
 GGAGCAGTATTGGGCAGCGCCAGTGATTACATCCAGTCAAGTATTCAAGCGCCCTGAGGCCCTGCCACC
 AAGCCCAAGGTCAAGGTTGAGGCCCCCTCTTCTCCCTGCTCCGGTACCATCTCTATTCTCAGAGGG
 AGGCTCCCTGTGTCTCAGAGCCTGACACCCACAGAAGGCCAGACAGCCCTCAGCAACATCTTCA
 TCACAAGCGAACCTATTCTTGGAAACAGGCCCAAGATGCCTCCTTCCCTACTTCCACAGAGCCTCAGGCT
 CCTGGTTGGTGGGCCCTCCCGGCTCACCTGCCCAAGGCCTCCTGACAAACCACCAAGGAAAAGAAAA
 AGAAGCCCCCACCCTGCTGGAGTCCCGTGGGAGCAGAGAAAACCACCCTGGGATCAAGACCAGTGT
 CCGAAAGCCCATTCAGATCAAGAAATCCAGGTCCAGGGACATGCAGCCCTCTTCTGCCTGTTAGGCAG



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ATTGTTCTGGAAGGGCTAAAACCCCAAGCCTCAGAAGGACAGGCACCGTTACCCGCCAGCTCTCTGTCC
 CACCTCTGCCTCCCAGGGTGTGCATCCCAGAGCTGTGCCACCCTCTAACCCAGAACCTTCTTTG
 GCTATTTGCACCTAGTCCCTCCGGGGACAGCCTGCTGCCCCCTACTCAGGAAATGAGATCCCCAGCCCC
 ATGGTAGCCCTGCAGTCAGGCTCCACTGGTGGCCCCCTTCCCCCTGCCGATGACAAGCTGGAGGAGCTCA
 TCCGGCAATTTGAGGCTGAATTTGGGGATAGCTTTGGGCTTCCCGGCCACCTTCGGTGCCATTAAGA
 ACCTGAAAACCAATCAACATGTCTCCAGCTCCGGAGAGCCCTTTTCCACCCCGTCCCCAAGAAGATC
 AAGATCGAGTCTCAGGGCCGTGACTGTGCTCAACTACCTGCCATTCCATTGAGAAGAGGGGGACAGG
 AGGCCACGCCACCAAGGCTGAGAACCCTCACACCAACCCTCAGTGGCTTCTTGAGTACCTCTAAA
 GTACCTAGACACCTACTAAGAGTCTGTGGACACACCGGCCAAGAAGGCTCAGTCCGAGTTCCTTACC
 TGCGATTGTGCGAACAAATAGTGGAGAAAGATGAAGGCCATATTACACTCACCTGGGATCTGGCCCCA
 CAGTAGCTTCTATCCGGAACTCATGGAGGATCGGTATGGAGAAAAGGGGAAAGCTATCCGGATTGAGAA
 GGTCTACTACACGGCAAGGAGGGGAAGAGTCTCGAGGCTGTCCATCGCCAAGTGGGTGATCCGAAGA
 CACACTGGAGGAGAAGCTGCTGTGCCTGGTGCGGCATCGGCCAGGCCACCATGTGACAACGCCGTGA
 TTGTTATCTTGATCCTGGCTGGGAGGGCATCCCTCGAAGCCTTGGGGACACCCTCTACCAGGAGCTTAC
 TGATACCTCCGGAAGTATGGCAACCCTACCAGCCGAGATGTGGCTCAATGATGACCGGACCTGTGCT
 TGCCAAGGCAAAGACCCTAACACCTGCGGTGCCTCCTTCTCCTTCGGCTGTTCTGGAGCATGACTTCA
 ACGGCTGCAAATATGCTCGGAGCAAGACGCCACGAAAGTTCCGCCTCACGGGAGACAATCCGAAGGAGGA
 GGAGGTGCTCCGGAATAGCTTTCAGGATCTGGCCACTGAAGTTGCTCCCCCTTACAAGCGGCTCGCACCC
 CAGGCCTATCAGAACCAGGTGACCAATGAGGATGTGGCGATCGACTGCCGCTGGGGCTGAAGGAAGGGA
 GACCTTCTCAGGGGTACAGCCTGCATGGACTTCTGTGCCACGCCACAAGGACCAACATAACCTCTA
 CAATGGGTGCACTGTGGTCTGCACCCTGACCAAGGAAGACAATCGCTGCTGGCCAGATCCCTGAGGAC
 GAGCAACTGCACGTGCTGCCCTCTACAAGTGGCCAGCAGGATGAGTTTGGCAGCGAGGAAAACCAGA
 GCCTCAAGGTGAGTGGGGCCATCCAGTGTGCTCACAGCATTTCCAGAGAGGTCGGGGCTGCTCTGA
 GCCTGCCAAGTCCCTGCCCAACCGCAGCTGGAAGCCAGGAAGGCGGGCCGAGAAAGAAGGCTGCAG
 AAGGAGAACTGAGCAGGCCAGAGAAGTCAAGCAGGAGGCCCTGGAGTTGGCTGGAGTCACTACTGACC
 CAGGCCTGTCTGAAGGGTGGATTGTCCAGCAAAGCCTGAAGCCCTCCCTCAAGGTGGAGCTCAGAA
 CCACTTTAGTCTTTAAGTACAGTGGCAATGCGGTGGTGGAAAGCTACTCGGTGCTGGGAGCTGCCGG
 CCCTCCGACCCCTACAGCATGAGCAGTGTGATTCTACCATTGCGCTATGCACAGCCTGGCCTGGCCT
 CTGTCAACGGCTTCCACTCCAAGTACACACTTCCCTCCTTTGGCTACTATGGCTTCCATCAAGCAACCC
 TGTCTTCCCTCCAGTTCCTGGGTCCCAGTGCCTGGGGCATGGGGCAGTGGAGGAGTTCCTGAGAAG
 AAGCCAGACCTCCATGCTCTACACAACAGCCTGAACCCAGCCTACGGTGGTGTGAGTTTGGCAGCTGC
 CAGGTCAGGCTGTTGCCACAGACAACCACCCCATCCCTCACCACCAGCAGCCTGCTTACCCAGGCC
 CAAGGAATATCTGCTACCAAGGTCCCCAGCTCCACCCAGCATCCAGGGACCCCTCTCCCTTTGCTCAG
 AGTTCCAGTTGCTACAACAGATCCATCAAGCAAGGCCAATAGACCCTCTGACCCAGGCTGAGTCCATTC
 CCAGAGACTCTGCTAAGATGAGTAGAACCCTTGCCGGAAGCATCTCAGAATGGGGACCCAGTCACT
 GTGGGGACAGTACTCAGGAGGCCAAGCATGTCCCGAAGAGGACTAACAGTGTAGGTGGCAACTGGGGC
 GTGTTCCCTCCGGGGGAGAGCCCTACCATTGTTCCCGACAAGCTCAATTCCTTTGGGGCCAGCTGTCTCA
 CTCCTTACACTTCCCAGAAAGCCAGTGGGACTGTTCACTGGTGAAGGCCAGCAGTCCGCCCCCATGC
 TGGAGCACGGCTTCGAGGCAAGCCATGGAGCCCTGCAAGTTTGGGAACGGCACCTCTGCCTTGACTGGT
 CCCAGCCTAACTGAGAAGCCATGGGGGATGGGAACCGGGGATTTCAACCCGCCCTGAAAGGTGGACCTG
 GTTTCCAAGACAAGTTGTGGAATCCTGTGAAGGTGGAGGAGGGCAGGATCCACACCCGGGGCCAACCC
 GCTAGACAAAAGCCTGGCAAGCCTTTGGCATGCCCTTGAGCTCCAACGAGAAGCTATTTGGGGCCTGAAG
 TCAGAGGAGAAACTGTGGGATCCCTTACGCTGGAGGAGGGGACAGCTGAGGAGCCCCCAGCAAGGGGG
 TGGTGAAGGAAGAGAAGAGTGGACCCACAGTGGAAAGGACGAGGAGGAAGTGTGGTGGGACAGTGAACA
 CAACTTCTGGATGAGAACATAGGCGGGGTGGCCGTGGCCCCGCCATTGCTCCATCTCATCGAGTGT
 GCCCGGCGAGAGTGCATGCCACACTCCACTCAAAAAACCAACCGCTGCCACCCACCCGCATCTCGC
 TGGTCTTCTACCAACACAAGAACCTCAACCAGCCCAACCAGGGTGGCGCTCTGGGAGGCAAGATGAA
 GCAGTGGCGGAACGGGCGGGCAGCGGAAGAGGAGGCCGACCGCTGGGCCTGGGCCAGCAGGAGGCC
 AAGCTCTACGGGAAGAAGCGAAAATGGGGGGTGTATGGTGGCTGAGCCCCAGCACAAAGAAAAGAAGG
 GGGCTATCCCTACCCGGCAGGCGCTGGCCATGCCACAGACTCCGCGGTACCGTGTCTTACGCCTA
 CAAAAGGTCACTGGCCCTACAGCCGCTGGATC**TAG**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul

ACCN: NM_183138

Insert Size: 5007 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_183138.2](#), [NP_898961.2](#)

RefSeq Size: 10907 bp

RefSeq ORF: 5007 bp

Locus ID: 194388

Cytogenetics: 6 C3

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 epigenetic chromatin reprogramming in the zygote following fertilization. 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. Selectively binds to the promoter region of target genes and contributes to regulate the expression of numerous developmental genes. In zygotes, DNA demethylation occurs selectively in the paternal pronucleus before the first cell division, while the adjacent maternal pronucleus and certain paternally-imprinted loci are protected from this process. Participates in DNA demethylation in the paternal pronucleus by mediating conversion of 5mC into 5hmC, 5fC and 5caC. Does not mediate DNA demethylation of maternal pronucleus because of the presence of DPPA3/PGC7 on maternal chromatin that prevents TET3-binding to chromatin. 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]

Transcript Variant: This variant (2) differs in the 5' UTR, lacks multiple exons in the coding region, and uses an in-frame downstream start codon, compared to variant 1. Variant 2 encodes a protein (isoform 2) with a shorter N-terminus, compared to isoform 1. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.