

Product datasheet for **SC111622**

DNMT3B (NM_006892) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DNMT3B (NM_006892) Human Untagged Clone
Tag:	Tag Free
Symbol:	DNMT3B
Synonyms:	ICF; ICF1; M.HsallIB
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene ORF sequence for NM_006892 edited
ATGAAGGGAGACACCAGGCATCTCAATGGAGAGGAGGACGCCGGCGGGAGGGAAGACTCG
ATCCTCGTCAACGGGGCCTGCAGCGACCAGTCTCCGACTCGCCCCAATCCTGGAGGCT
ATCCGCACCCCGGAGATCAGAGGCCGAAGATCAAGCTCGCGACTCTCAAGAGGGAGGTG
TCCAGTCTGCTAAGCTACACACAGGACTTGACAGGCGATGGCGACGGGGAAGATGGGGAT
GGCTCTGACACCCAGTATGCCAAAGCTCTTCCGGGAAACCAGGACTCGTTCAGAAAGC
CCAGTGTCCGAACTCGAAATAACAACAGTGTCTCCAGCCGGGAGAGGCACAGGCCTTCC
CCACGTTCCACCCGAGGCCGGCAGGGCCCAACCATGTGGACGAGTCCCCCGTGGAGTTC
CCGGCTACCAGGTCCTGAGACGGCGGGCAACAGCATCGGCAGGAACGCCATGGCCGTCC
CCTCCCAGCTCTTACCTTACCATCGACCTCACAGACGACACAGAGGACACACATGGGACG
CCCCAGAGCAGCAGTACCCCTACGCCCGCTAGCCCAGGACAGCCAGCAGGGGGCATG
GAGTCCCCCGAGGTGGAGGCAGACAGTGGAGATGGAGACAGTTCAGAGTATCAGGATGGG
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GCCATGGTGGTGTCTTGAAGGCCACCTCAAGCGACAGGCTATGTCTGGCATGCCGTGG
GTCCAGTGGTTTGGCGATGGCAAGTCTCCGAGGTCTCTGCAGACAACTGGTGGCACTG
GGGCTGTTCCAGCCAGCACTTTAATTTGGCCACCTTCAATAAGCTCGTCTCTATCGAAAA
GCCATGTACCATGCTCTGGAGAAAGCTAGGGTGCAGGCTGGCAAGACCTTCCCCAGCAGC
CCTGGAGACTCATTGGAGGACCAGCTGAAGCCATGTTGGAGTGGGCCACGGGGCTTC
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AGACGCACAGCTGACGACTCAGCCACCTTGACTACTGCCCCGACCCAAAGCGCTCAAG
ACAAATGCTATAACAACGGCAAAGACCGAGGGGATGAAGATCAGAGCCGAGAACAATG
GCTTCAGATGTTGCCAACAACAAGAGCAGCCTGGAAGATGGCTGTTTGTCTTGTGGCAGG
AAAAACCCCGTCTCTTCCACCTCTCTTTGAGGGGGGCTCTGTGACAGATGCCGGGAT
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TGCTGCGAGGGCCGAGAGCTGCTGCTTTGCAGCAACACGAGCTGCTGCCGGTGTCTGTG
GTGGAGTGCCTGGAGGTGCTGGTGGGCACAGGCACAGCGCCGAGGCCAAGCTTCAGGAG
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GACTGGAACGTGCGCCTGCAGGCCTTCTCACCAGTGACACGGGGCTTGAATACGAAGCC
CCCAAGCTGTACCCTGCCATTCCCGCAGCCGAAGGCGGCCCATTCGAGTCTGTCAATTG
TTTGATGGCATCGCGACAGGCTACCTAGTCTCAAGAGTTGGGCATAAAGGTAGGAAAAG
TACGTCGCTTCTGAAGTGTGTGAGGAGTCCATTGCTGTTGGAACCGTGAAGCACGAGGGG
AATATCAAATACGTGAACGACGTGAGGAACATCACAAGAAAAATATTGAAGAATGGGGC
CCATTTGACTTGGTGATTGGCGGAAGCCATGCAACGATCTCTCAAATGTGAATCCAGCC
AGGAAAGGCCTGTATGAGGGTACAGGCCGGCTCTTCTTGAATTTTACCACCTGTGTAAT
TACTCACGCCCAAGGAGGGTGTGACCGGCCGTTCTTCTGGATGTTTGAAGATGTTGTA
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ATTGATGCCATCAAAGTTTCTGCTGCTCACAGGGCCCGATACTTCTGGGGCAACCTACCC
GGGATGAACAGGATCTTTGGCTTCTCTGTGCACTACACAGACGTGTCCAACATGGGCCGT
GGTGCCCGCCAGAAGCTGCTGGGAAGTCTGGAGCGTGCCTGTATCCGACACCTCTTC
GCCCCCTGAAGGACTACTTTGCATGTAATAG
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_006892 unedited
 GCATATGTAATACGACTCACTATAGGGCGGCCGCGATTTCGGCACGAGGCCGACCCGCGGC
 TCCGCCGCCAGCCGCGCCCCAGCCAGCCCTGCGGCAGGAAAGCATGAAGGGAGACACCA
 GGCATCTCAATGGAGAGGAGGACGCCGGCGGGAGGGAAGACTCGATCCTCGTCAACGGGG
 CCTGCAGCGACCACTCTCCGACTCGCCCCAATCCTGGAGGCTATCCGCACCCCGGAGA
 TCAGAGGCCGAAGATCAAGCTCGCGACTCTCAAGAGGGAGGTGTCCAGTCTGCTAAGCT
 ACACACAGGACTTGACAGGCGATGGCGACGGGGAAGATGGGGATGGCTCTGACACCCAG
 TCATGCCAAAGCTCTCCGGGAAACCAGGACTCGTTTCAAGAAAGCCAGCTGTCCGAACTC
 GAAATAACAACAGTGTCTCCAGCCGGGAGAGGCACAGGCCTTCCCCACGTTCCACCCGAG
 GCCGCGAGGGCCCAACCATGTGGACGAGTCCCCCGTGGAGTTCCCGGCTACCAGTCCC
 TGAGACGGCGGGCAACAGCATCGGCAGGAACGCCATGGCCGTCCCCTCCCAGCTTTACC
 TTACCATCGACCTCACAGACGACACAGAGGACACACATGGGACGCCCCAGAGCAGCAGTA
 CCCCTACGCCCGCTAGCCAGGACAGCCAGCAGGGGGGCATGGAGTCCCCGAGGTGG
 AGGCAGACAGTGGAGATGGAGACAGTTCAGAGTATCAGGATGGGAAGGAGTTTGGATAG
 GGGACCTCGTGTGGGAAAGATCAAGGGCTTCTCCTGGTGGCCCGCATGGTGGTGTCTTG
 GAAGGCCACCTNACGCGACAGGCTATGTCTGCATGNCGTGGTTCAGTGGTTTGGCGATGG
 GCAGTCTNCGAGGTCTCTGAGACAACTGGTACTTGGGGCTGTTACCAGCACTTTATTN
 GGCCACTTTCATAGCT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_006892 unedited
 ACGACTNTGNNACCGCGCCGCATNCTANGATCGAGTTTTTTTTTTTTTTTTTTAGACAA
 ATACTGATTTTAAATTAACATAAGGTAACTCTAGGCATCCGTCATCTTTCAGCCTAAAA
 ATTAGCAAAAACGTGTTGAAACAAGGCACAGTTTTTCCCATATTTGTTACGTCGTGGCT
 CCAATTACAAAAAATTTAATGAAAACGTTAAACATAAAAAATAGAAGTTTGAGATTTTA
 AAAAGTGATAAAAAGCCCCACAAAACCTGTCAACGTTGTTTCTTATTCTACAAAATAGC
 ACCAGTAAGAAGAGTAAAAGGTGTTAAAAACCATTATGACAGCATTCTGAAATGCAGCT
 TGTCTGAATTCCTGTTCTCCCTAAAAACGACTTCTTATGGAATAAAAAAGGATTAATA
 TCTCCAAAGGGAGCACCAGCTTTCAGTTTTCCCTGTCATCTCTCAGATGTGGGAAGG
 TATGAGAAATGTATGTCTGTCCCTGACTGCTGCTCACTGCCTCTGAGTTTAGTAAAAAGAT
 GAGAAATGAGGGTAGCAGACTTTCATCTGGGGACCTGTGCCTGTGGAGGGTAGGTCTCC
 TGGAGAGGGAATGGGTTTGGGGGGTGTCTTATCTAAGCTCCTTGCTTACACTCCTCTC
 CTAGGGAAGAGGGAGATACGGAGGAGCCATACTTGTCTACAAAATATATGGCAGCTTATA
 TTATAGAACTCAGCACACCCCTTCTGAGCTCCCCAGAGGGTTCTATTGCAGTCACGGGG
 AGGGATTTAGCTAACAGTGGCCCTGCCTTAGGGTTTGTGGGGAAAAAATAGCCCTGAT
 GTGATGATGACGTCATCCCTGCTGAAATATCATCATTGTGGAATACTCTATAAGTCCC
 TGCAGACTCCAGCCCTGNATTTATGCANGNGCAATGTGCCTGGTAAAGACAN

Restriction Sites:

NotI-NotI

ACCN:

NM_006892

Insert Size:

3800 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_006892.3](#), [NP_008823.1](#)

RefSeq Size: 4353 bp

RefSeq ORF: 2562 bp

Locus ID: 1789

UniProt ID: [Q9UBC3](#)

Cytogenetics: 20q11.21

Domains: PWWP, DNA_methylase

Protein Families: Druggable Genome, Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency

Protein Pathways: Cysteine and methionine metabolism, Metabolic pathways

Gene Summary:

CpG methylation is an epigenetic modification that is important for embryonic development, imprinting, and X-chromosome inactivation. Studies in mice have demonstrated that DNA methylation is required for mammalian development. This gene encodes a DNA methyltransferase which is thought to function in de novo methylation, rather than maintenance methylation. The protein localizes primarily to the nucleus and its expression is developmentally regulated. Mutations in this gene cause the immunodeficiency-centromeric instability-facial anomalies (ICF) syndrome. Eight alternatively spliced transcript variants have been described. The full length sequences of variants 4 and 5 have not been determined. [provided by RefSeq, May 2011]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).