

## Product datasheet for **MG222222**

### Ctcf1 (NM\_001081387) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ctcf1 (NM_001081387) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ctcf1
Synonyms:	Boris; OTTMUSG00000016680
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG222222 representing NM\_001081387  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGCCGCTGAGGTCCTGTCCCTTCTGGGTACTTCAACCAGATCAAAGAGCAGAAGTTGAAGCCTG  
 GAGACCTAGAGGAGGAGAAAGAGGAGGACGGGGTACAAAGAGTGAAGCCAGGAGGAGTTGTCAAGGA  
 GGTGGAGGCCGAGAACAGTTGCCTGCTTCTGGAGGCCAGGGCCCCGGTGGAGAGCGACAGCGGATCCTG  
 ACCCTGCAAACGGTGCACCTGGAGTCCCAGGATGTGCACCTACAGGGGCTGGGATGGCTGAGCGTGCCAC  
 ACTCTGAGGAGCTTTCAGGGACGGTACCAGAGGCGGAAGGCATACTGCAGTTGCCATCCGTGCTGTGGCT  
 CGACCCAGAGCCCCAGCTCAGCCTTACGATTGCGTGACGGTACGATCCCGGAAGAGCTGTACCCACCA  
 GAGGAGCTGCAGCGGATACATTTTACCTGCTGAGAGAGAATGTGCTAATGGCCGAGGAGAACCAGAGT  
 TAACACCAGACTTGGACGAAAGCACAGCCCTGAAAAGCCCGAAGAAGATGAAAAGGACCAGCTCCCGCC  
 CCAGGGAGAGACAGACAAGAGAGAAGAGAGGTTGCTCCTTCTGGAAATGAAACAAAAGAGGGAAAAGAC  
 GACGAAATTTGTCCTGACCATTTCCCATCTAAGCCTCGAAGAACAGCAAGATCCACCAGCGGCCAATCAGA  
 CAAGTGTGCCGGGAGCCAAAGCCGCAAAACAAAACGGCGGAGGACAGCAAGGGAAAGCCTCAGAGCTT  
 TCAGTGTGACACCTGCCCGTTCACTTCCCTCCAAGCTCTCAACTTTCAATCGTCACATCAAAATTCACAGC  
 AATGAGAGGCCACACCTGTGTACCTGTGCCTGAAGGCCCTCCGGACTGTCACTTCTTAGGAACCATG  
 TGAACACCCACACAGGAACCAGGCCCAACAGTGCAGGGACTGCGACATGGCGTTTGTACCAGTGGAGA  
 ACTCGTCCGGCACAGGCGTTACAACACACTTATGAGAAGCCCTCAAGTGTCCCTGTGCAAGTACGCC  
 AGCGTCGAGGCAAGCAAGATGAAGCGTCACATCCGCTCACACCGGGTACGCGTCCCTCCAGTGTGGCC  
 AGTGTGCTTACGCCAGCAGGGACTCCTACAAGCTGAAGCGCCACATGAGGACACACTCAGTGAGAAGCC  
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 CCATGAGCGCTATGCCCTCATTACGACCCAGAGGCCACAAGAACGAGAAGAAGTTCAAGTGAAGCAG  
 TGCGATTACGCGTGAAGCAGGAGCGATGCTTGAAGGCGCACATGCGCATGCACACAGGAGAGAAGCCCT  
 TCTCCTGCCTGGCCTGCAACAAGCACTTCCGACAGAAGCAGCTACTGACCGTGCACCTGAGGAAGTACCA  
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 TGACAAGGACACAGGCCCTCGGAGGGAGAAGCAGGACACAAGGAAGGGGAGCCTCAGTGCCCTGGGGAGCA  
 GGCTCTGGGCCACCAAGGAGAAGCAGCGGGGAGCCAGAGCCCAGACCACGGCCTTACCTGCGAGATAATC  
 TTTAACATGATGGATAAG

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

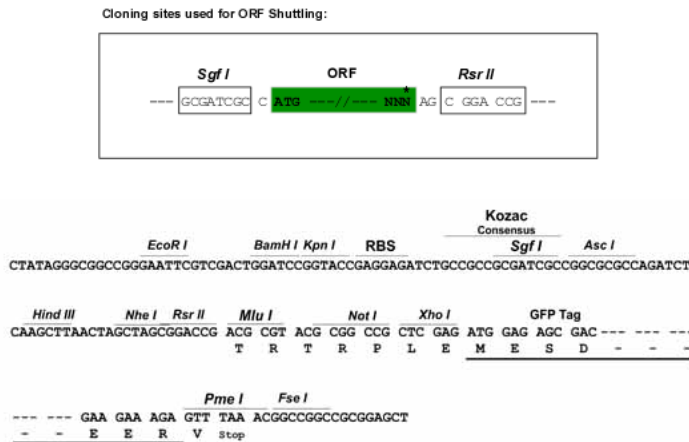
>MG222222 representing NM\_001081387  
 Red=Cloning site Green=Tags(s)

MAAAEVPVPSGYFTQIKEQKLPKGDLEEEKEEDGVQRVEAQEGVVEAENSCLLLEAPVSDRRIL  
 TLQTVHLESQDVHLQGLGWL SVPHSEELSGTVPEAEGILQLPSVLWLDPEPQLSLQHCVTVSIPEELYPP  
 EELQRIHFHLLRENVLMAEENPELTPDLDESTALKKPEEDEKDLPPQGETDKREERLLLLLEMPKKEGKD  
 DEIVLTISHLSLEEQQDPPAANQTSVPGAKAAKPKRRRQTKGKPSFQCDTCPFTSSKLSFNRHIKIHS  
 NERPHLCHLCLKAFRTVTLRNHVNTHTGTRPHKCRDCDMAFVTSSELVRHRRYKHTYKPFKCSLCKYA  
 SVEASKMKRHIRSHTGERPFQCCQAYASRDSYKLRHMRTSHGEKPYECPTCHVRFVTSGMTKIHIAQK  
 HGENVPKYECPHCATIIARKSDLRVHLRNLHSQSPEEMKCRYCPAGFHERYALIQHQRTHKNEKFKCKQ  
 CDYACKQERCLKAHMRMHTGEKPFSLACNKHFRQKQLLTVHLRKYHDPNFVPLHLCLKCDKRF SRWSN  
 LQRHRKCDPEHETLAPNKDRRPVTRTQASEGEAGHKEGEPQCPGEQALGHQGEAAGSQSPDHGLTCEII  
 FNMMDK

SGP**TRRRLE** - GFP Tag - V

Restriction Sites: SgfI-RsrII

Cloning Scheme:



ACCN: NM\_001081387

ORF Size: 1908 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\\_001081387.2](#), [NP\\_001074856.1](#)

RefSeq Size: 3217 bp

RefSeq ORF: 1911 bp

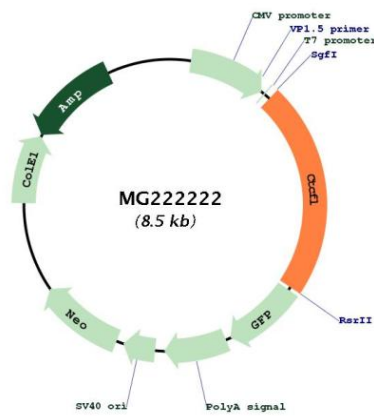
Locus ID: 664799

UniProt ID: [A2APF3](#)

**Cytogenetics:** 2 H3

**Gene Summary:** Testis-specific DNA binding protein responsible for insulator function, nuclear architecture and transcriptional control, which probably acts by recruiting epigenetic chromatin modifiers. Plays a key role in gene imprinting in male germline, by participating in the establishment of differential methylation at the IGF2/H19 imprinted control region (ICR). Directly binds the unmethylated H19 ICR and recruits the PRMT7 methyltransferase, leading to methylate histone H4 'Arg-3' to form H4R3sme2. This probably leads to recruit de novo DNA methyltransferases at these sites. Seems to act as tumor suppressor. In association with DNMT1 and DNMT3B, involved in activation of BAG1 gene expression by binding to its promoter. Required for dimethylation of H3 lysine 4 (H3K4me2) of MYC and BRCA1 promoters.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG222222