

## Product datasheet for **MG224594**

### Zbtb7a (NM\_010731) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Zbtb7a (NM_010731) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Zbtb7a
Synonyms:	9030619K07Rik; 9130006G12Rik; AI452336; FBI-1; Lrf; Pokemon; Zbtb7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG224594 representing NM\_010731  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTGGCGCGTGGACGGCCCATCGGGATCCCCTTCCCGACCACAGCAGCGACATCCTGAGCGGCC  
 TGAACGAGCAGCGGACTCAGGGGCTGCTTTCGACGTGGTGATTCTTGTGGAAGGACGTGAGTCCCCAC  
 GCACCGCTCGGTGCTGGCCGCTGCAGCCAGTACTTCAAGAAGCTGTTACGTCGGGAGCTGTAGTGGAC  
 CAGCAGAAGCTGTACGAGATCGACTTCGTGAGTCCGAGGCACTGACGGCGCTCATGGACTTCGCCTACA  
 CCGCCACGCTCACGGTCAGCACGGCCAATGTGGGCGACATCCTGAGTGCAGCAGCGCTGTGGAGATCCC  
 GGCCGTGAGCCACGTGTGCGCCGACCTGCTGGAGCGTCAGATTCTGGCGGCTGATGATGTGGGCGACGCG  
 AGCCAGCCGACGGGGCGGGCCCACTGACCAGCGCACTGCTGCGTGCCAAGGAGTACCTGGAGTTCT  
 TCCGAGTAACCCATGAATAGCCTGCCCCCACTGCCTCCCATGGTCTGGCTTCGGTGCCTCCGACGA  
 CGACTGGACGCCACCAAGGAGGCTGTGGCCGCCGCTGTGGCCGCTGTGGCCGACGCGACTGCAATGGC  
 TTGGACTTCTATGGCCAGGGCCCCGGCTGATCGGCCCCAGCCGGCGATGGAGATGAGGGTGACAGTA  
 CCCCAGGGCTGTGGCTGAGAGAGATGAAGATGCCCCGCCGGAGGGCTCTTCCACCTCTACTGCCCC  
 ACCGGCCACCACAGAACGGCCACTATGGCCGTGCAGGGGCTGGCACCGGTGAAGAAGAAGCGCGGCT  
 CTCTCTGAGGCCGCTCCAGAGCCGGGCGACTCCCCGGCTTCTGTGAGGCGCTGCAGAGGGCGAGGATG  
 GGGACGCCGCTGATGTGGATGGCTAGCGGCCAGCACGCTGTACAGCAGATGATGTCATCGGTGGGCCG  
 GGCCGGGACAGTGATGAGGAGTCGCAACCGACGACAAGGGCGTCATGGACTACTACCTGAAGTACTTC  
 AGTGAGCCACGAGGGGATGTGTACCCAGCCTGGTCACAGAAGGGTGAGAAGAAAATCCGGGCCAAGG  
 CCTTCCAGAAGTGTCCATCTCGGAGAAGGTGATTCAGGGTCCCGCAAGCTGCCCGTCACATCCGCAC  
 GCACACGGGCGAGAAGCCCTACGAGTGAACATCTGTAAGTTCGATTCCAGACAGGACAAGCTGAAG  
 GTGCACATGCGGAAGCACACGGGTGAGAAGCCGTACCTGTGCCAGCAGTGCAGCGCCGCTTCGCGCACA  
 ACTACGACCTGAAGAACCACATGCGGGTGCACACGGGGCTGCGGCCATACCAGTGCATAGCTGTGCAA  
 GACCTTTGTGCGCTCCGACCATCTGCACAGACCTCAAGAAGGACGGCTGCAATGGGGTCCCCTCGCGC  
 CGCGGCCCAAGCCCGTGTGCGGGGTGTCCACCCGATGTCCCTGCGGGGCGCGCACCCCCGGGC  
 TCCCGGACGCCCGCAATGGCCAGGAGAAGCACTTTAAGGACGAGGAGGACGAGGAGGAGGCCAG  
 CCCGGACGGCTCGGGCCGCTGAATGTAGCGGGCAGCGGAGGAGACGATGGTGCAGGTGGCCGGCGGTG  
 GCCACCGCGAGGGTAACCTCGCAACC

**ACGCGT**ACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>MG224594 representing NM\_010731  
 Red=Cloning site Green=Tags(s)

MAGGVDGPIGIPFPDHSSDILSGLNEQRTQGLLCDVVILVEGREFPTHRSVLAACSQYFKKLFTSGAVVD  
 QQNVYEIDFVSAEALTALMDFAYTATLTVSTANVGDILSAARLLEIPAVSHVCADLLERQILAADDVGD  
 SQPDGAGPTDQRNLLRAKEYLEFFRSNPMNSLPPTAFPWSGFGAPDDDLATKEAVAAAVAAGAAGCNG  
 LDFYGPAPPADRPPAGDGEDSTPGLWPERDEDAPPGGLFPPPTAPPATTQNGHYGRAGAGTGEEEAAA  
 LSEAAPEPGDSPGFLSGAAEGEDGDAADVGLAASTLLQMMSSVGRAGDSDEESRTDDKGVMDYLLKYF  
 SGAHEGDVYPAWSQKGEKKIRAKAFQKCPICEKVIQAGKLPRIHRTHTGEKPYECNICKVRFTRQDKL  
 VHM RKHTGEKPYLCQQCGAAFAHNYDLKNHMRVHTGLRPYQCDSCCKTFVRSDDLHRHLKKGDCNGVPSR  
 RGRKPRVRGVPDPVAGAGAPPGLPDAPRNGQEKHFKDEEEDEEEASPDGSGRLNVAGSGGDDGAGGPAV  
 ATAEGNFAT

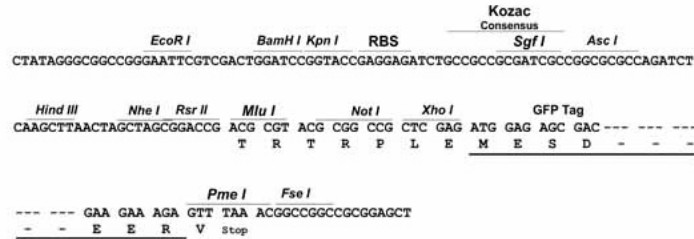
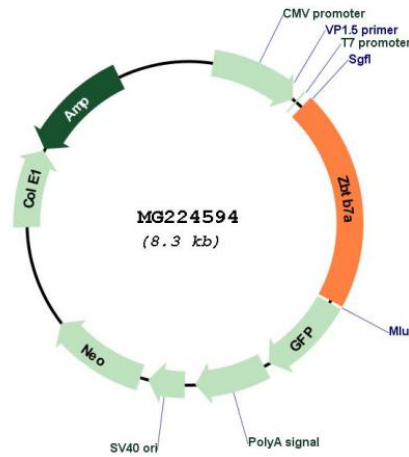
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:


**Plasmid Map:**


ACCN: NM\_010731

ORF Size: 1707 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](mailto: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](#)

**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\\_010731.3](#), [NP\\_034861.3](#)

**RefSeq Size:** 5373 bp

**RefSeq ORF:** 1710 bp

**Locus ID:** 16969

**UniProt ID:** [O88939](#)

**Cytogenetics:** 10 C1

**Gene Summary:**

Transcription factor that represses the transcription of a wide range of genes involved in cell proliferation and differentiation (PubMed:15337766, PubMed:15662416, PubMed:17495164, PubMed:26816381, PubMed:29813070). Directly and specifically binds to the consensus sequence 5'-[GA][CA]GACCCCCCCC-3' and represses transcription both by regulating the organization of chromatin and through the direct recruitment of transcription factors to gene regulatory regions (PubMed:15337766, PubMed:15662416, PubMed:26816381, PubMed:29813070). Negatively regulates SMAD4 transcriptional activity in the TGF-beta signaling pathway through these two mechanisms (By similarity). That is, recruits the chromatin regulator HDAC1 to the SMAD4-DNA complex and in parallel prevents the recruitment of the transcriptional activators CREBBP and EP300 (By similarity). Collaborates with transcription factors like RELA to modify the accessibility of gene transcription regulatory regions to secondary transcription factors (PubMed:29813070). Also directly interacts with transcription factors like SP1 to prevent their binding to DNA (By similarity). Functions as an androgen receptor/AR transcriptional corepressor by recruiting NCOR1 and NCOR2 to the androgen response elements/ARE on target genes (By similarity). Thereby, negatively regulates androgen receptor signaling and androgen-induced cell proliferation (By similarity). Involved in the switch between fetal and adult globin expression during erythroid cells maturation (PubMed:26816381). Through its interaction with the NuRD complex regulates chromatin at the fetal globin genes to repress their transcription (PubMed:26816381). Specifically represses the transcription of the tumor suppressor ARF isoform from the CDKN2A gene (PubMed:15662416). Efficiently abrogates E2F1-dependent CDKN2A transactivation (PubMed:15662416). Regulates chondrogenesis through the transcriptional repression of specific genes via a mechanism that also requires histone deacetylation (PubMed:15337766). Regulates cell proliferation through the transcriptional regulation of genes involved in glycolysis (By similarity). Involved in adipogenesis through the regulation of genes involved in adipocyte differentiation (By similarity). Plays a key role in the differentiation of lymphoid progenitors into B and T lineages (PubMed:17495164). Promotes differentiation towards the B lineage by inhibiting the T-cell instructive Notch signaling pathway through the specific transcriptional repression of Notch downstream target genes (PubMed:17495164). Also regulates osteoclast differentiation (By similarity). May also play a role, independently of its transcriptional activity, in double-strand break repair via classical non-homologous end joining/cNHEJ (PubMed:26446488). Recruited to double-strand break sites on damage DNA, interacts with the DNA-dependent protein kinase complex and directly regulates its stability and activity in DNA repair (PubMed:26446488). May also modulate the splicing activity of KHDRBS1 toward BCL2L1 in a mechanism which is histone deacetylase-dependent and thereby negatively regulates the pro-apoptotic effect of KHDRBS1 (By similarity).[UniProtKB/Swiss-Prot Function]