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# Product datasheet for MR224594

## Zbtb7a (NM_010731) Mouse Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Zbtb7a (NM_010731) Mouse Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Zbtb7a |
| **Synonyms:** | 9030619K07Rik; 9130006G12Rik; AI452336; FBI-1; Lrf; Pokemon; Zbtb7 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |



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**ORF Nucleotide Sequence:**

>MR224594 representing NM_010731
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTGGCGGCGTGGACGGCCCCATCGGGATCCCGTTCCCGGACCACAGCAGCGACATCCTGAGCGGCC
TGAACGAGCAGCGGACTCAGGGGCTGCTTTGCGACGTGGTGATTCTTGTGGAAGGACGTGAGTTCCCCAC
GCACCGCTCGGTGCTGGCCGCCTGCAGCCAGTACTTCAAGAAGCTGTTCACGTCGGGAGCTGTAGTGGAC
CAGCAGAACGTGTACGAGATCGACTTCGTGAGTGCCGAGGCACTGACGGCGCTCATGGACTTCGCCTACA
CCGCCACGCTCACGGTCAGCACGGCCAATGTGGGCGACATCCTGAGTGCAGCACGGCTGCTGGAGATCCC
GGCCGTGAGCCACGTGTGCGCCGACCTGCTGGAGCGTCAGATTCTGGCGGCTGATGATGTGGGCGACGCG
AGCCAGCCCGACGGGGCGGGCCCCACTGACCAGCGCAACCTGCTGCGTGCCAAGGAGTACCTGGAGTTCT
TCCGCAGTAACCCCATGAATAGCCTGCCCCCCACTGCCTTCCCATGGTCTGGCTTCGGTGCCCCCGACGA
CGACCTGGACGCCACCAAGGAGGCTGTGGCCGCCGCTGTGGCCGCTGTGGCCGCAGGCGACTGCAATGGC
TTGGACTTCTATGGCCCAGGGCCCCCGGCTGATCGGCCCCCAGCCGGCGATGGAGATGAGGGTGACAGTA
CCCCAGGGCTGTGGCCTGAGAGAGATGAAGATGCCCCGCCCGGAGGGCTCTTCCCACCTCCTACTGCCCC
ACCGGCCACCACACAGAACGGCCACTATGGCCGTGCAGGGGCTGGCACCGGTGAAGAAGAAGCGGCGGCT
CTCTCTGAGGCCGCTCCAGAGCCGGGCGACTCCCCGGGCTTCCTGTCAGGCGCTGCAGAGGGCGAGGATG
GGGACGCCGCTGATGTGGATGGGCTAGCGGCCAGCACGCTGCTACAGCAGATGATGTCATCGGTGGGCCG
GGCCGGGGACAGTGATGAGGAGTCGCGAACCGACGACAAGGGCGTCATGGACTACTACCTGAAGTACTTC
AGTGGAGCCCACGAGGGGGATGTGTACCCAGCCTGGTCACAGAAGGGTGAGAAGAAAATCCGGGCCAAGG
CCTTCCAGAAGTGTCCCATCTGCGAGAAGGTGATTCAGGGTGCCGGCAAGCTGCCCCGTCACATCCGCAC
GCACACGGGCGAGAAGCCCTACGAGTGTAACATCTGTAAAGTTCGATTCACCAGACAGGACAAGCTGAAG
GTGCACATGCGGAAGCACACGGGTGAGAAGCCGTACCTGTGCCAGCAGTGCGGCGCCGCCTTCGCGCACA
ACTACGACCTGAAGAACCACATGCGGGTGCACACGGGGCTGCGGCCATACCAGTGCGATAGCTGCTGCAA
GACCTTTGTGCGCTCCGACCATCTGCACAGACACCTCAAGAAGGACGGCTGCAATGGGGTCCCCTCGCGC
CGCGGCCGCAAGCCCCGTGTGCGGGGTGTGCCACCCGATGTCCCTGCCGGGGCCGGCGCACCCCCCGGGC
TCCCGGACGCCCCGCGCAATGGCCAGGAGAAGCACTTTAAGGACGAGGAGGAGGACGAGGAGGAGGCCAG
CCCGGACGGCTCAGGCCGCCTGAATGTAGCGGGCAGCGGAGGAGACGATGGTGCAGGTGGCCCGGCGGTG
GCCACCGCCGAGGGTAACTTCGCAACC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR224594 representing NM_010731
Red=Cloning site Green=Tags(s)

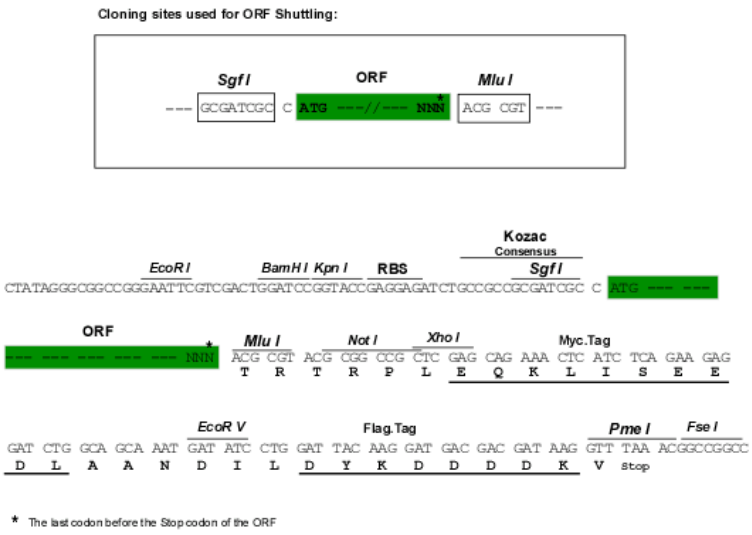
MAGGVDGPIGIPFPDHSSDILSGLNEQRTQGLLCDVVILVEGREFPTHRSVLAACSQYFKKLFTSGAVVD
QQNVYEIDFVSAEALTALMDFAYTATLTVSTANVGDILSAARLLEIPAVSHVCADLLERQILAADDVGDA
SQPDGAGPTDQRNLLRAKEYLEFFRSNPMNSLPPTAFPWSGFGAPDDDLDATKEAVAAAVAAVAAGDCNG
LDFYGPGPPADRPPAGDGDEGDSTPGLWPERDEDAPPGGLFPPPTAPPATTQNGHYGRAGAGTGEEEAAA
LSEAAPEPGDSPGFLSGAAEGEDGDAADVDGLAASTLLQQMMSSVGRAGDSDEESRTDDKGVMDYYLKYF
SGAHEGDVYPAWSQKGEKKIRAKAFQKCPICEKVIQGAGKLPRHIRTHTGEKPYECNICKVRFTRQDKLK
VHMRKHTGEKPYLCQQCGAAFAHNYDLKNHMRVHTGLRPYQCDSCCKTFVRSDHLHRHLKKDGCNGVPSR
RGRKPRVRGVPPDVPAGAGAPPGLPDAPRNGQEKHFKDEEEDEEEASPDGSGRLNVAGSGGDDGAGGPAV
ATAEGNFAT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/ja2113_d11.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**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 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:**

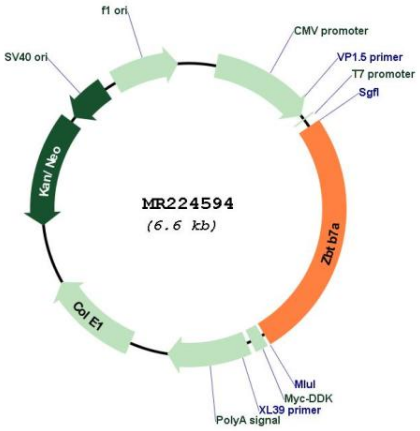
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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 |
| **MW:** | 60.7 kDa |

**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]GACCCCCCCCC-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]

## Product images:




Circular map for MR224594