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Product datasheet for RC222759

Pokemon (ZBTB7A) (NM_015898) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pokemon (ZBTB7A) (NM_015898) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pokemon
Synonyms:	FBI-1; FBI1; LRF; pokemon; TIP21; ZBTB7; ZNF857A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>RC222759 representing NM_015898
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCGGCGGCGTGGACGGCCCCATCGGGATCCCGTTCCCCGACCACAGCAGCGACATCCTGAGTGGGC
TGAACGAGCAGCGGACGCAGGGCCTGCTGTGCGACGTGGTGATCCTGGTGGAGGGCCGCGAGTTCCCCAC
GCACCGCTCGGTGCTGGCCGCCTGCAGCCAGTACTTCAAGAAGCTGTTCACGTCGGGCGCCGTGGTGGAC
CAGCAGAACGTGTACGAGATCGACTTCGTCAGCGCCGAGGCGCTCACCGCGCTCATGGACTTCGCCTACA
CGGCCACGCTCACCGTCAGCACAGCCAACGTGGGTGACATCCTCAGCGCCGCCCGCCTGCTGGAGATCCC
CGCCGTGAGCCACGTGTGCGCCGACCTCCTGGACCGGCAGATCCTGGCGGCCGACGCGGGCGCCGACGCC
GGGCAGCTGGACCTTGTAGATCAAATTGATCAGCGCAACCTCCTCCGCGCCAAGGAGTACCTCGAGTTCT
TCCAGAGCAACCCCATGAACAGCCTGCCCCCCGCGGCCGCCGCCGCCGCTGCCAGCTTCCCGTGGTCCGC
CTTTGGGGCGTCCGATGATGACCTGGATGCCACCAAGGAGGCCGTGGCCGCCGCTGTGGCCGCCGTGGCC
GCGGGCGACTGCAACGGCTTAGACTTCTATGGGCCGGGCCCCCCGGCCGAGCGGCCCCCGACGGGGGACG
GGGACGAGGGCGACAGCAACCCGGGTCTGTGGCCAGAGCGGGATGAGGACGCCCCCACCGGGGGTCTCTT
TCCGCCGCCGGTGGCCCCGCCGGCCGCCACGCAGAACGGCCACTACGGCCGCGGCGGAGAGGAGGAGGCC
GCCTCGCTGTCGGAGGCGGCCCCCGAGCCGGGCGACTCTCCGGGCTTCCTGTCGGGAGCGGCCGAGGGCG
AGGACGGGGACGGGCCCGACGTGGACGGGCTGGCGGCCAGCACGCTGCTGCAGCAGATGATGTCATCGGT
GGGCCGGGCGGGGGCCGCGGCGGGGGACAGCGACGAGGAGTCGCGGGCCGACGACAAGGGCGTCATGGAC
TACTACCTGAAGTACTTCAGCGGCGCCCACGACGGCGACGTCTACCCGGCCTGGTCGCAGAAGGTGGAGA
AGAAGATCCGAGCCAAGGCCTTCCAGAAGTGCCCCATCTGCGAGAAGGTCATCCAGGGCGCCGGCAAGCT
GCCGCGACACATCCGCACCCACACGGGCGAGAAGCCCTACGAGTGCAACATCTGCAAGGTCCGCTTCACC
AGGCAGGACAAGCTGAAGGTGCACATGCGGAAGCACACGGGCGAGAAGCCGTACCTGTGCCAGCAGTGCG
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AACGGCGTCCCCTCGCGCCGCGGCCGCAAGCCCCGCGTCCGGGGCGGGGCGCCCGACCCCAGCCCGGGGG
CCACCGCGACCCCCGGCGCCCCCGCCCAGCCCAGCTCCCCCGACGCCCGGCGCAACGGCCAGGAGAAGCA
CTTTAAGGACGAGGACGAGGACGAGGACGTGGCCAGCCCCGACGGCTTGGGCCGGTTGAATGTAGCGGGC
GCCGGTGGAGGAGGTGACAGCGGAGGTGGCCCCGGGGCCGCCACCGACGGTAACTTCACAGCCGGACTCG
CC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC222759 representing NM_015898
Red=Cloning site Green=Tags(s)

MAGGVDGPIGIPFPDHSSDILSGLNEQRTQGLLCDVVILVEGREFPTHRSVLAACSQYFKKLFTSGAVVD
QQNVYEIDFVSAEALTALMDFAYTATLTVSTANVGDILSAARLLEIPAVSHVCADLLDRQILAADAGADA
GQLDLVDQIDQRNLLRAKEYLEFFQSNPMNSLPPAAAAAAASFPWSAFGASDDDLDATKEAVAAAVAAVA
AGDCNGLDFYGPGPPAERPPTGDGDEGDSNPGLWPERDEDAPTGGLFPPPVAPPAATQNGHYGRGGEEEA
ASLSEAAPEPGDSPGFLSGAAEGEDGDGPDVDGLAASTLLQQMMSSVGRAGAAAGDSDEESRADDKGVMD
YYLKYFSGAHDGDVYPAWSQKVEKKIRAKAFQKCPICEKVIQGAGKLPRHIRTHTGEKPYECNICKVRFT
RQDKLKVHMRKHTGEKPYLCQQCGAAFAHNYDLKNHMRVHTGLRPYQCDSCCKTFVRSDHLHRHLKKDGC
NGVPSRRGRKPRVRGGAPDPSPGATATPGAPAQPSSPDARRNGQEKHFKDEDEDEDVASPDGLGRLNVAG
AGGGGDSGGGPGAATDGNFTAGLA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3975_c02.zip

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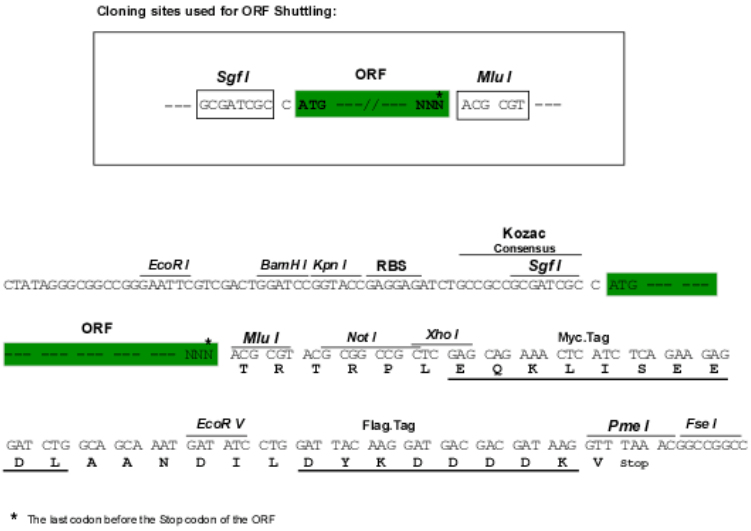
Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_015898

ORF Size: 1752 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_015898.4

RefSeq Size: 4456 bp

RefSeq ORF: 1755 bp

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Locus ID:	51341
UniProt ID:	O95365
Cytogenetics:	19p13.3
Domains:	BTB, zf-C2H2
Protein Families:	Transcription Factors
MW:	61.3 kDa

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Gene Summary:

Transcription factor that represses the transcription of a wide range of genes involved in cell proliferation and differentiation (PubMed:14701838, PubMed:17595526, PubMed:20812024, PubMed:25514493, PubMed:26455326, PubMed:26816381). 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:12004059, PubMed:17595526, PubMed:20812024, PubMed:25514493, PubMed:26816381). Negatively regulates SMAD4 transcriptional activity in the TGF-beta signaling pathway through these two mechanisms (PubMed:25514493). 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 (PubMed:25514493). Collaborates with transcription factors like RELA to modify the accessibility of gene transcription regulatory regions to secondary transcription factors (By similarity). Also directly interacts with transcription factors like SP1 to prevent their binding to DNA (PubMed:12004059). Functions as an androgen receptor/AR transcriptional corepressor by recruiting NCOR1 and NCOR2 to the androgen response elements/ARE on target genes (PubMed:20812024). Thereby, negatively regulates androgen receptor signaling and androgen-induced cell proliferation (PubMed:20812024). 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 (By similarity). Efficiently abrogates E2F1-dependent CDKN2A transactivation (By similarity). Regulates chondrogenesis through the transcriptional repression of specific genes via a mechanism that also requires histone deacetylation (By similarity). Regulates cell proliferation through the transcriptional regulation of genes involved in glycolysis (PubMed:26455326). Involved in adipogenesis through the regulation of genes involved in adipocyte differentiation (PubMed:14701838). Plays a key role in the differentiation of lymphoid progenitors into B and T lineages (By similarity). 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 (By similarity). 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 (By similarity). 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 (By similarity). 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 (PubMed:24514149). [UniProtKB/Swiss-Prot Function]

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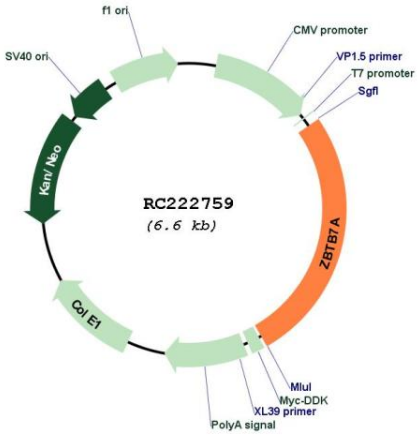
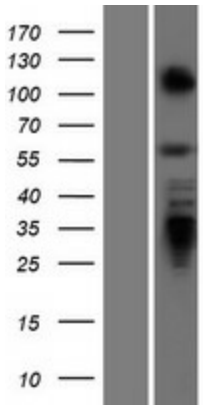
Product images:



Circular map for RC222759



Western blot validation of overexpression lysate (Cat# [LY414330]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222759 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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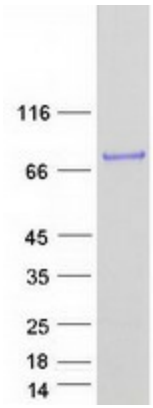

Coomassie blue staining of purified ZBTB7A protein (Cat# [TP322759]). The protein was produced from HEK293T cells transfected with ZBTB7A cDNA clone (Cat# RC222759) using MegaTran 2.0 (Cat# [TT210002]).

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