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Product datasheet for RC202049

Tristetraprolin (ZFP36) (NM_003407) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tristetraprolin (ZFP36) (NM_003407) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tristetraprolin
Synonyms:	G0S24; GOS24; NUP475; RNF162A; TIS11; TTP; zfp-36
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

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>RC202049 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGATCTGACTGCCATCTACGAGAGCCTCCTGTCGCTGAGCCCTGACGTGCCCGTGCCATCCGACCATG
GAGGGACTGAGTCCAGCCCAGGCTGGGGCTCCTCGGGACCCTGGAGCCTGAGCCCCTCCGACTCCAGCCC
GTCTGGGGTCACCTCCCGCCTGCCTGGCCGCTCCACCAGCCTAGTGGAGGGCCGCAGCTGTGGCTGGGTG
CCCCCACCCCCTGGCTTCGCACCGCTGGCTCCCCGCCTGGGCCCTGAGCTGTCACCCTCACCCACTTCGC
CCACTGCAACCTCCACCACCCCCTCGCGCTACAAGACTGAGCTATGTCGGACCTTCTCAGAGAGTGGGCG
CTGCCGCTACGGGGCCAAGTGCCAGTTTGCCCATGGCCTGGGCGAGCTGCGCCAGGCCAATCGCCACCCC
AAATACAAGACGGAACTCTGTCACAAGTTCTACCTCCAGGGCCGCTGCCCCTACGGCTCTCGCTGCCACT
TCATCCACAACCCTAGCGAAGACCTGGCGGCCCCGGGCCACCCTCCTGTGCTTCGCCAGAGCATCAGCTT
CTCCGGCCTGCCCTCTGGCCGCCGGACCTCACCACCACCACCAGGCCTGGCCGGCCCTTCCCTGTCCTCC
AGCTCCTTCTCGCCCTCCAGCTCCCCACCACCACCTGGGGACCTTCCACTGTCACCCTCTGCCTTCTCTG
CTGCCCCTGGCACCCCCCTGGCTCGAAGAGACCCCACCCCAGTCTGTTGCCCCTCCTGCCGAAGGGCCAC
TCCTATCAGCGTCTGGGGGCCCTTGGGTGGCCTGGTTCGGACCCCCTCTGTACAGTCCCTGGGATCCGAC
CCTGATGAATATGCCAGCAGCGGCAGCAGCCTGGGGGGCTCTGACTCTCCCGTCTTCGAGGCGGGAGTTT
TTGCACCACCCCAGCCCGTGGCAGCCCCCCGGCGACTCCCCATCTTCAATCGCATCTCTGTTTCTGAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
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Protein Sequence:

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>RC202049 protein sequence
Red=Cloning site Green=Tags(s)

MDLTAIYESLLSLSPDVPVPSDHGGTESSPGWGSSGPWSLSPSDSSPSGVTSRLPGRSTSLVEGRSCGWV
PPPPGFAPLAPRLGPELSPSPTSPTATSTTPSRYKTELCRTFSESGRCRYGAKCQFAHGLGELRQANRHP
KYKTELCHKFYLQGRCPYGSRCHFIHNPSEDLAAPGHPPVLRQSISFSGLPSGRRTSPPPPGLAGPSLSS
SSFSPSSSPPPPGDLPLSPSAFSAAPGTPLARRDPTPVCCPSCRRATPISVWGPLGGLVRTPSVQSLGSD
PDEYASSGSSLGGSDSPVFEAGVFAPPQPVAAPRRLPIFNRISVSE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV
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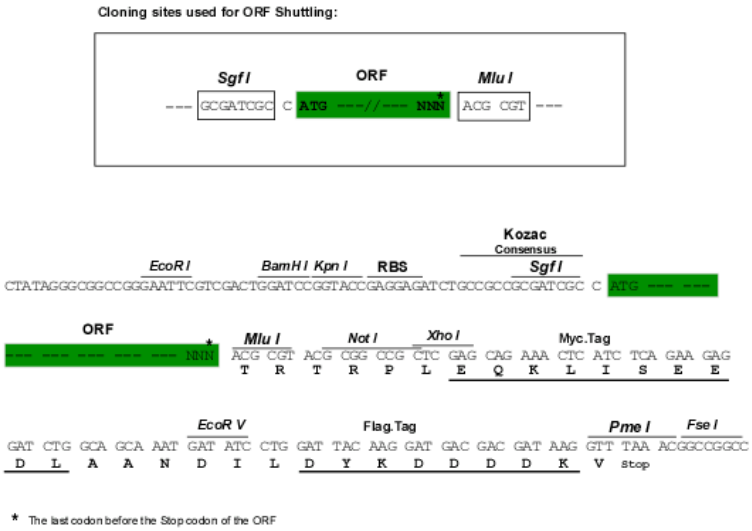
Chromatograms: https://cdn.origene.com/chromatograms/mk6004_b01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003407

ORF Size: 978 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

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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_003407.5
RefSeq Size:	1752 bp
RefSeq ORF:	981 bp
Locus ID:	7538
UniProt ID:	P26651
Cytogenetics:	19q13.2
Domains:	zf-CCCH
MW:	34 kDa
Gene Summary:	Zinc-finger RNA-binding protein that destabilizes several cytoplasmic AU-rich element (ARE)-containing mRNA transcripts by promoting their poly(A) tail removal or deadenylation, and hence provide a mechanism for attenuating protein synthesis (PubMed:9703499, PubMed:10330172, PubMed:10751406, PubMed:11279239, PubMed:12115244, PubMed:12748283, PubMed:15187101, PubMed:15634918, PubMed:17030620, PubMed:16702957, PubMed:20702587, PubMed:20221403, PubMed:21775632, PubMed:27193233, PubMed:23644599, PubMed:25815583). Acts as an 3'-untranslated region (UTR) ARE mRNA-binding adapter protein to communicate signaling events to the mRNA decay machinery (PubMed:15687258, PubMed:23644599). Recruits deadenylase CNOT7 (and probably the CCR4-NOT complex) via association with CNOT1, and hence promotes ARE-mediated mRNA deadenylation (PubMed:23644599). Functions also by recruiting components of the cytoplasmic RNA decay machinery to the bound ARE-containing mRNAs (PubMed:11719186, PubMed:12748283, PubMed:15687258, PubMed:16364915). Self regulates by destabilizing its own mRNA (PubMed:15187101). Binds to 3' UTR ARE of numerous mRNAs and of its own mRNA (PubMed:10330172, PubMed:10751406, PubMed:12115244, PubMed:15187101, PubMed:15634918, PubMed:17030620, PubMed:16702957, PubMed:19188452, PubMed:20702587, PubMed:20221403, PubMed:21775632, PubMed:25815583). Plays a role in anti-inflammatory responses; suppresses tumor necrosis factor (TNF)-alpha production by stimulating ARE-mediated TNF-alpha mRNA decay and several other inflammatory ARE-containing mRNAs in interferon (IFN)- and/or lipopolysaccharide (LPS)-induced macrophages (By similarity). Plays also a role in the

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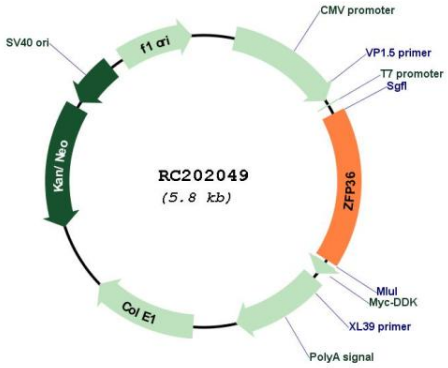
regulation of dendritic cell maturation at the post-transcriptional level, and hence operates as part of a negative feedback loop to limit the inflammatory response (PubMed:18367721). Promotes ARE-mediated mRNA decay of hypoxia-inducible factor HIF1A mRNA during the response of endothelial cells to hypoxia (PubMed:21775632). Positively regulates early adipogenesis of preadipocytes by promoting ARE-mediated mRNA decay of immediate early genes (IEGs) (By similarity). Negatively regulates hematopoietic/erythroid cell differentiation by promoting ARE-mediated mRNA decay of the transcription factor STAT5B mRNA (PubMed:20702587). Plays a role in maintaining skeletal muscle satellite cell quiescence by promoting ARE-mediated mRNA decay of the myogenic determination factor MYOD1 mRNA (By similarity). Associates also with and regulates the expression of non-ARE-containing target mRNAs at the post-transcriptional level, such as MHC class I mRNAs (PubMed:18367721). Participates in association with argonaute RISC catalytic components in the ARE-mediated mRNA decay mechanism; assists microRNA (miRNA) targeting ARE-containing mRNAs (PubMed:15766526). May also play a role in the regulation of cytoplasmic mRNA decapping; enhances decapping of ARE-containing RNAs, in vitro (PubMed:16364915). Involved in the delivery of target ARE-mRNAs to processing bodies (PBs) (PubMed:17369404). In addition to its cytosolic mRNA-decay function, affects nuclear pre-mRNA processing (By similarity). Negatively regulates nuclear poly(A)-binding protein PABPN1-stimulated polyadenylation activity on ARE-containing pre-mRNA during LPS-stimulated macrophages (By similarity). Also involved in the regulation of stress granule (SG) and P-body (PB) formation and fusion (By similarity). Plays a role in the regulation of keratinocyte proliferation, differentiation and apoptosis (PubMed:27182009). Plays a role as a tumor suppressor by inhibiting cell proliferation in breast cancer cells (PubMed:26926077).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC202049

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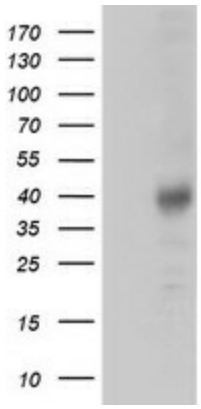
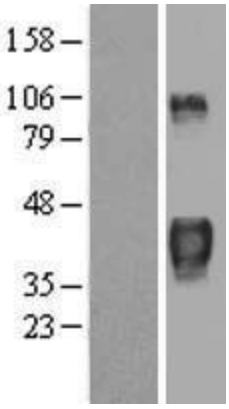


HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ZFP36 (Cat# RC202049, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ZFP36(Cat# [TA502383]). Positive lysates [LY401161] (100ug) and [LC401161] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401161]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202049 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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