

Product datasheet for **RC202847**

DDIT4 (NM_019058) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DDIT4 (NM_019058) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DDIT4
Synonyms:	Dig2; REDD-1; REDD1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202847 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGCCTAGCCTTTGGGACCGCTTCTCGTCGTCGTCCACCTCCTCTTCGCCCTCGTCCTTGCCCCGAACCTC
CCACCCAGATCGGCCGCCGCGCTCAGCCTGGGGTCGGCGACCCGGGAGGAGGGTTTGACCGCTCCAC
GAGCCTGGAGAGCTCGGACTGCGAGTCCCTGGACAGCAGCAACAGTGGCTTCGGGCCGGAGGAAGACACG
GCTTACCTGGATGGGGTGTCTTGCCCGACTTCGAGCTGCTCAGTGACCCTGAGGATGAACACTTGTGTG
CCAACCTGATGCAGCTGCTGCAGGAGAGCCTGGCCAGGCGGGCTGGGCTCTCGACGCCCTGCGCGCCT
GCTGATGCCTAGCCAGTTGGTAAGCCAGGTGGGCAAGAAGTACTGCGCCTGGCCTACAGCGAGCCGTGC
GGCCTGCGGGGGCGCTGCTGGACGTCTGCGTGGAGCAGGGCAAGAGCTGCCACAGCGTGGGCCAGCTGG
CACTCGACCCAGCCTGGTGCCACCTTCCAGCTGACCCTCGTGCTGCGCCTGGACTCACGACTCTGGCC
CAAGATCCAGGGGCTGTTTAGCTCCGCCAACTCTCCCTTCCCTGGCTTCAGCCAGTCCCTGACGCTG
AGCACTGGCTTCCGAGTCATCAAGAAGAAGCTGTACAGCTCGGAACAGCTGCTCATTGAGGAGTGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC202847 protein sequence
 Red=Cloning site Green=Tags(s)

MPSLWDRFSSSTSSSPSSLPRTPTPDRPPRSWGSATREEGFDRSTSLESSDCESLDSSNSGFGPEEDT
 AYLDGVSLPDFELLSDPEDEHLCANLMQLLQESLAQARLGSRPARLLMPSQLVSQVGKELLRLAYSEPC
 GLRGALLDVCVEQKGSCHSVGQLALDPSLVPTFQLTLVRLDSRLWPKIQGLFSSANSPLPGFSQSLTL
 STGFRVIKKKLYSSEQLLIEEC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6076_f02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_019058

ORF Size: 696 bp

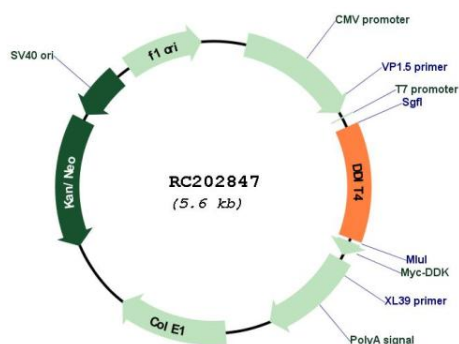
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

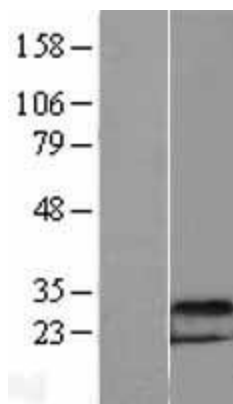
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none"> 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:	<u>NM_019058.4</u>
RefSeq Size:	1752 bp
RefSeq ORF:	699 bp
Locus ID:	54541
UniProt ID:	<u>Q9NX09</u>
Cytogenetics:	10q22.1
Protein Pathways:	mTOR signaling pathway
MW:	25.4 kDa
Gene Summary:	<p>Regulates cell growth, proliferation and survival via inhibition of the activity of the mammalian target of rapamycin complex 1 (mTORC1). Inhibition of mTORC1 is mediated by a pathway that involves DDIT4/REDD1, AKT1, the TSC1-TSC2 complex and the GTPase RHEB. Plays an important role in responses to cellular energy levels and cellular stress, including responses to hypoxia and DNA damage. Regulates p53/TP53-mediated apoptosis in response to DNA damage via its effect on mTORC1 activity. Its role in the response to hypoxia depends on the cell type; it mediates mTORC1 inhibition in fibroblasts and thymocytes, but not in hepatocytes (By similarity). Required for mTORC1-mediated defense against viral protein synthesis and virus replication (By similarity). Inhibits neuronal differentiation and neurite outgrowth mediated by NGF via its effect on mTORC1 activity. Required for normal neuron migration during embryonic brain development. Plays a role in neuronal cell death.</p> <p>[UniProtKB/Swiss-Prot Function]</p>

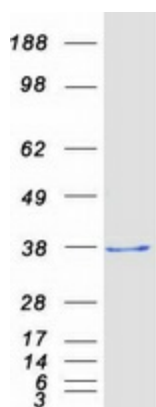
Product images:



Circular map for RC202847



Western blot validation of overexpression lysate (Cat# [LY402731]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202847 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DDIT4 protein (Cat# [TP302847]). The protein was produced from HEK293T cells transfected with DDIT4 cDNA clone (Cat# RC202847) using MegaTran 2.0 (Cat# [TT210002]).