

Product datasheet for RC204631

IMPACT (NM_018439) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IMPACT (NM_018439) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IMPACT
Synonyms:	RWDD5
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC204631 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCTGAGGGGGACGCAGGGAGCGACCAGAGGCAGAATGAGGAAATGAAGCAATGGCAGCCATTTATG
GCGAGGAGTGGTGTGCATTGATGACTGTGCCAAAATATTTTGTATTAGAATTAGCGACGATATAGATGA
CCCCAAATGGACACTTTGCTTGCAGGTGATGCTGCCGAATGAATACCCAGGTACAGCTCCACCTATCTAC
CAGTTGAATGCTCCTTGGCTTAAAGGGCAAGAAGTGGCGATTTATCAAATAGCCTTGAGGAAATATATA
TTCAGAATATCGGTGAAAGTATTCTTTACCTGTGGGTGGAGAAAATAAGAGATGTTCTTATACAAAATC
TCAGATGACAGAACCAGGCCAGATGTAAGAAGAAAACCTGAAGAGGAAGATGTTGAATGTGAAGATGAT
CTCATTTTAGCATGTCAGCCGAAAGTTCCGTTAAAGCATTGGATTTTGATATCAGTGAAACTCGGACAG
AAGTAGAAGTAGAAGAATTACCTCCGATTGATCATGGCATTCTATTACAGACCGAAGAAGTACTTTTCA
GGCACACTTGGCTCCAGTGGTTTGTCCCAAACAGGTGAAAATGGTTCTTTCCAAATTGTATGAGAATAAG
AAAATAGCTAGTGCCACCCACAACATCTATGCCTACAGAATATATTGTGAGGATAAACAGACCTTCTTAC
AGGATTTGTGAGGATGATGGGAAACAGCAGCTGGTGGCGTCTTCTTCATCTCATGGAGATTTTGAATGT
GAAGAATGTATGGTGGTAGTATCACGCTGGTATGGAGGGATTCTGCTAGGACCAGATCGCTTTAAACAT
ATCAACAACCTGTGCCAGAAACATACTAGTGAAAAGAAGTACACAAATTCACCTGAGGAGTCATCTAAGG
CTTTGGGAAAGAACAAAAAGTAAAGAAAAGACAAGAAGAGGAATGAACAT

ACGCGTACGCGGCCGCTCGAGCAGAAAACCTATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
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Protein Sequence: >RC204631 protein sequence
 Red=Cloning site Green=Tags(s)

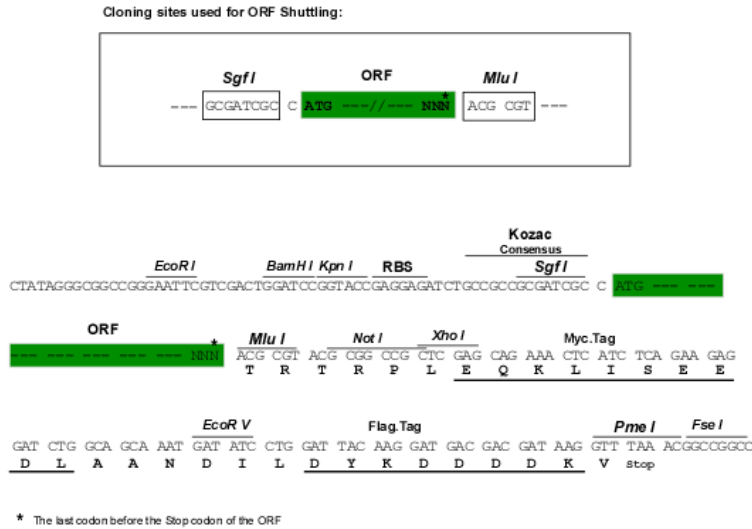
MAEGDAGSDQRQNEEIEAMAAIYGEEWCVIDDCAKIFCIRISDDIDDPKWTLC LQVMLPNEYPGTAPPIY
 QLNAPWLKQGERADLSNSLEEIYIQNIGESILYLWVEKIRDVLIQKSQMTPEPGPDVKKKTEEDVECDD
 LILACQPESSVKALDFDISETRTEVEVEELPPIDHGIPITDRRSTFQHLAPVVC PKQVMVLSKLYENK
 KIA SATHNIYAYRIYCEDKQTF LQDCEDDGETAAGRLLHLMEILNVKNVMVVVSRWYGGILLGPDRFKH
 INN CARNILVEKNYTN S PEESSKALGKNKKVRKDKKRNEH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

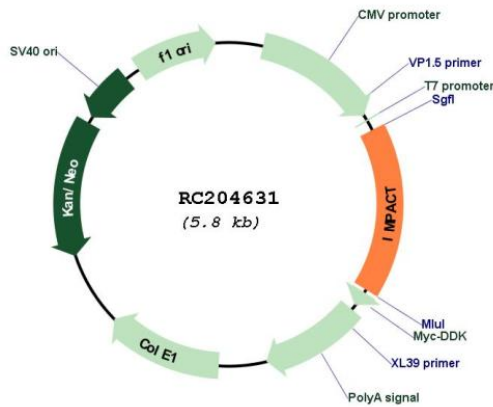
Chromatograms: https://cdn.origene.com/chromatograms/mk6722_e06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



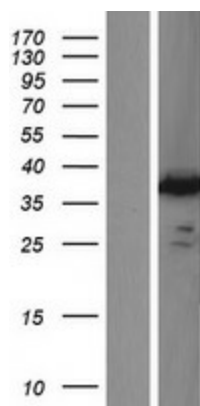
Plasmid Map:



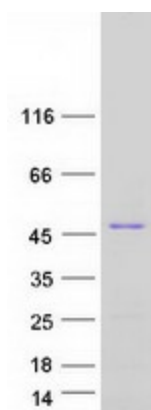
ACCN: NM_018439

ORF Size:	960 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.
RefSeq:	NM_018439.3
RefSeq Size:	3764 bp
RefSeq ORF:	963 bp
Locus ID:	55364
UniProt ID:	Q9P2X3 , A0A024RC24
Domains:	UPF0029, RWD
MW:	36.5 kDa
Gene Summary:	Translational regulator that ensures constant high levels of translation upon a variety of stress conditions, such as amino acid starvation, UV-C irradiation, proteasome inhibitor treatment and glucose deprivation. Plays a role as a negative regulator of the EIF2AK4/GCN2 kinase activity; impairs GCN1-mediated EIF2AK4/GCN2 activation, and hence EIF2AK4/GCN2-mediated eIF-2-alpha phosphorylation and subsequent down-regulation of protein synthesis. May be required to regulate translation in specific neuronal cells under amino acid starvation conditions by preventing GCN2 activation and therefore ATF4 synthesis. Through its inhibitory action on EIF2AK4/GCN2, plays a role in differentiation of neuronal cells by stimulating neurite outgrowth.[UniProtKB/Swiss-Prot Function]

Product images:



Western blot validation of overexpression lysate (Cat# [LY412993]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204631 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified IMPACT protein (Cat# [TP304631]). The protein was produced from HEK293T cells transfected with IMPACT cDNA clone (Cat# RC204631) using MegaTran 2.0 (Cat# [TT210002]).