

Product datasheet for **RC214701**

IFIT3 (NM_001031683) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IFIT3 (NM_001031683) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	IFIT3
Synonyms:	CIG-49; cig41; GARG-49; IFI60; IFIT4; IRG2; ISG60; P60; RIG-G
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC214701 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGAGTGAGGTCACCAAGAATTCCTTGGAGAAAATCCTTCCACAGCTGAAATGCCATTTACCTGGAAC
 TATTCAAGGAAGACAGTGTCTCAAGGGATCTAGAAGATAGAGTGTGTAACCAAGATTGAATTTTTAAACAC
 TGAGTTCAAAGCTACAATGTACAACCTGTTGGCCTACATAAAAACACCTAGATGGTAAACAAGGAGGACGC
 CTGGAATGCTTACGGCAAGCTGAAGAGTTAATCCAGCAAGAACATGCTGACCAAGCAGAAAATCAGAAGTC
 TAGTCACTTGGGAAAACACGCCTGGGTCTACTATCACTTGGGCAGACTCTCAGATGCTCAGATTTATGT
 AGATAAGGTGAAACAACTGCAAGAAAATTTCAAATCCATACAGTATTGAGTATTCTGAACTTGACTGT
 GAGGAAGGTGGACACAACCTGAAGTGTGGAAGAAATGAAAGGGCAAGGTGTGTTTTGAGAAGGCTCTGG
 AAGAAAAGCCCAACAACCCAGAATTCCTCTGGACTGGCAATTGCGATGTACCATCTGGATAATCACCC
 AGAGAAACAGTTCTACTGATGTTTTGAAGCAGGCCATTGAGCTGAGTCCTGATAACCAATACGTCAG
 GTTCTCTTGGGCCTGAACTGCAGAAGATGAATAAAGAAGCTGAAGGAGAGCAGTTTGTTGAAGAAGCCT
 TGGAAAAGTCTCCTTGCCAAACAGATGTCTCCGCACTGCAGCCAAATTTACAGAAGAAAAGGTGACCT
 AGACAAAGCTATTGAACTGTTTCAACGGGTGTTGGAATCCACACCAAAACAATGGCTACCTCTATCACCAG
 ATGGGTGCTGCTACAAGGCAAAAGTAAGACAAATGCAGAATACAGGAGAATCTGAAGCTAGTGGAAATA
 AAGAGATGATTGAAGCACTAAAGCAATATGCTATGGACTATTCGAATAAGCTCTTGAGAAGGGACTGAA
 TCCTCTGAATGCATACTCCGATCTCGTGTGAGTTCTGGAGACGGAATGTTATCAGACACCATTCAATAAG
 GAAGTCCTGATGCTGAAAAGCAACAATCCCATCAGCGCTACTGCAACCTTCAGAAATATAATGGGAAGT
 CTGAAGCACTGCTGTGCAACATGGTTTAGAGGTTTGTCCATAAGCAAAAAATCAACTGACAAGGAAGA
 GATCAAAGACCAACCACAGAATGTATCTGAAAATCTGCTTCCACAAAATGCACCAAAATTATTGGTATCTT
 CAAGGATTAATTCATAAGCAGAATGGAGATCTGCTGCAAGCAGCCAAATGTTATGAGAAGGAACTGGGCC
 GCCTGCTAAGGGATGCCCTTCAAGGCATAGGCAGTATTTTCTGTGAGCATCTGAGCTTGAGGATGGTAG
 TGAGGAAATGGGCCAGGGCGCAGTCACTCCAGTCCAGAGAGCTCTCTCTAACTCAGAGCAACTGAAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC214701 protein sequence
 Red=Cloning site Green=Tags(s)

MSEVTKNSLEKILPQKCHFTWNLFKEDSVSRDLEDRVCNQIEFLNTEFKATMYNLLAYIKHLDGNNEAA
 LECLRQAEELIQQEHADQAEIRSLVTWGNyawvyyHLGRLSDAQIYVDKVKQTCKKFSNPYSIEYSELDC
 EEGWTQLKGRNERAKVCFEKALEEKPNPEFSSGLAIAMYHLDNHPEKQFSTDVLKQAIELSPDNQYVK
 VLLGLKLQKMNKEAEGEQFVEEALEKSPCQTDVLRSAKFYRRKGDLDKAIELFQRVLESTPNNGYLHQ
 IGCCYKAKVRQMNTGESEASGNKEMIEALKQYAMDYSNKALEKGLNPLNAYSDLAEFLETECYQTPFNK
 EVPDAEKQQSHQRYCNLQKYNKSEDTAHQHGLEGLSISKSTDKEEIKDQPQNVSENLLPQNPYNYWL
 QGLIHKQNGDLLQAAKCYEKELGRLLRDAPSGIGSIFLSASELEDGSEEMQGAVSSPRELLSNSEQLN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6385_e09.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001031683

ORF Size: 1470 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.

RefSeq: [NM_001031683.4](#)

RefSeq Size: 2467 bp

RefSeq ORF: 1473 bp

Locus ID: 3437

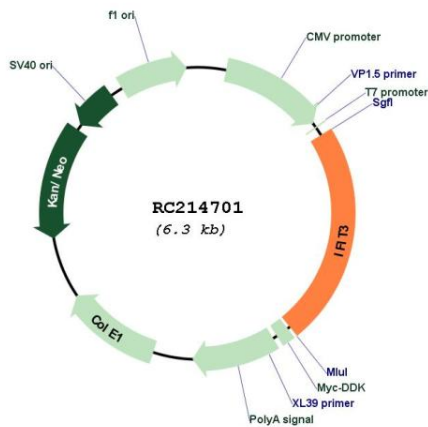
UniProt ID: [O14879](#)

Cytogenetics: 10q23.31

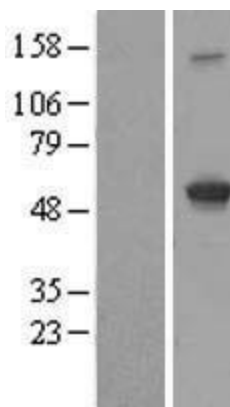
MW: 56 kDa

Gene Summary: IFN-induced antiviral protein which acts as an inhibitor of cellular as well as viral processes, cell migration, proliferation, signaling, and viral replication. Enhances MAVS-mediated host antiviral responses by serving as an adapter bridging TBK1 to MAVS which leads to the activation of TBK1 and phosphorylation of IRF3 and phosphorylated IRF3 translocates into nucleus to promote antiviral gene transcription. Exhibits an antiproliferative activity via the up-regulation of cell cycle negative regulators CDKN1A/p21 and CDKN1B/p27. Normally, CDKN1B/p27 turnover is regulated by COPS5, which binds CDKN1B/p27 in the nucleus and exports it to the cytoplasm for ubiquitin-dependent degradation. IFIT3 sequesters COPS5 in the cytoplasm, thereby increasing nuclear CDKN1B/p27 protein levels. Upregulates CDKN1A/p21 by downregulating MYC, a repressor of CDKN1A/p21. Can negatively regulate the apoptotic effects of IFIT2.[UniProtKB/Swiss-Prot Function]

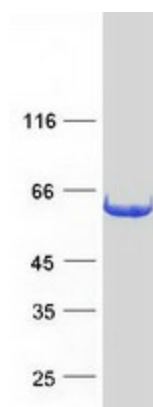
Product images:



Circular map for RC214701



Western blot validation of overexpression lysate (Cat# [LY421898]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214701 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified IFIT3 protein (Cat# [TP314701]). The protein was produced from HEK293T cells transfected with IFIT3 cDNA clone (Cat# RC214701) using MegaTran 2.0 (Cat# [TT210002]).