

## Product datasheet for **RC200045**

### **GIT2 (NM\_139201) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GIT2 (NM_139201) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GIT2
Synonyms:	CAT-2; CAT2; PKL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC200045 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTCGAAACGGCTCCGGAGCAGCGAGGTGTCGCTGACTGCAGCGGGCCGGATCCTTCCTGGGCATCAG  
 TAAATAGGGGAACGTTTTTATGTGATGAGTGCTGCAGTGCCATCGGAGTCTAGGGCGCCATATCTCCCA  
 AGTGAGGCATCTGAAACACACACCGTGGCCTCCAACACTGCTTCAGATGTTGAGACCTTGATAATAAC  
 GGTGCTAACTCTATATGGGAGCATTCTTTGCTGGACCCTGCGTCTATTATGAGTGAAGACGTAAGCTA  
 ATCCACAGGATAAAGTACATCCCAATAAAGCGGAATTCATCAGAGCCAAGTATCAGATGTTAGCGTTCGT  
 CCATCGCTTGCCCTGCCGGGATGACGATAGTGTGACTGCCAAAGATCTTAGCAAGCAACTCCATTCGAGC  
 GTGAGAACAGGGAATCTTGAAACCTGTTGAGACTGTTATCTTTAGGAGCACAAGCCAATCTTTTCATC  
 CTGAAAAAGGAAACACCCCACTCCATGTTGCCCTCAAAGCAGGGCAGATTTACAGGCTGAATTATTGGC  
 AGTATATGGAGCAGACCCAGGCACACAGGATTCTAGTGGGAAAACCTCCGTTGATTATGCAAGGCAAGGA  
 GGGCACCATGAGCTGGCAGAGCGCTCGTGAAATACAGTATGAGCTAACGGACAGACTAGCCTTCTATC  
 TCTGTGGCAGGAAACCAGATCACAAAAATGGACAGCACTTTATAATACCTCAAATGGCAGACAGCAGCCT  
 GGATTTGTCTGAATTGGCAAAAGCTGCTAAGAAGAACTTCAATCTCTAAGTAATCATTTGTTTGAAGAA  
 CTTGCCATGGATGTACGATGAAGTTGACAGGCGAGAGACGGATGCAGTCTGGCTTGCCACGCAAAACC  
 ACAGCGCCTGGTAACCGAGACAACGGTCGTCCTTTCTCCGGTCAATCCTGAGTACTCATCAACACG  
 AAATCAGGGCAGACAGAAGTTAGCTCGGTTCAACGCCATGAGTTTCCACGCTGGTCATTGACATTCTC  
 AGTGACGCCAAGAGGAGACAGCAGGGCAGTTCTCTCTCGGGTTCAAAGACAATGTGGAGCTCATACTGA  
 AAACCATCAATAACCAGCACAGCGTTGAGAGTCAAGACAACGATCAGCCGACTATGACAGCGTGGCATC  
 AGACGAAGACACAGATTTGGAAACCACTGCAAGCAAAACAAACCGGACAGAAGGCCTAGATTCAGATTTA  
 TCAGATGGACCAGTCACTGTACAGGAATTTATGGAGGTCAAAAACGCTCTAGTGGCTTCTGAGGCCAAGA  
 TACAGCAGCTAATGAAGGTGAATAACAACCTGAGTGACGAGCTGAGAATTATGCAGAAAAAGTTGCTTGG  
 AAAAGATGCTAAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC200045 protein sequence  
 Red=Cloning site Green=Tags(s)

MSKRLRSSEVCADCSGPDPSPSWASVNRGTFLCDECCSVHRSRGRHISQVRHLKHTPWPTLLQMVETLYNN  
 GANSIWEHSLDPASIMSGRRKANPQDKVHPNKAEIFIRAKYQMLAFVHRLPCRDDDSVTAKDLSKQLHSS  
 VRTGNLETCLRLLSLGAQANFFHPEKGNTPHVAASKAGQILQAELLAVYGADPGTQDSSGKTPVDYARQG  
 GHHELAERLVEIQYELTDRLAFYLCGRKPDHKNQHFIIIPQMADSSLDLSELAKAAKKQLQSLSNHLFEE  
 LAMDMYDEVDRRETDVWLATQNHSAALVTETTVVFPVLPVNPYSSSTRNQGRQKLARFNAHEFATLVIDIL  
 SDAKRRQGGSSLSGSKDNVELILKTIINQHSVESQDNDQPDYDSVASDEDTDLETTASKTNRQKSLDSDL  
 SDGPVTVQEFMEVKNALVASEAKIQQLMKVNNLSDLRIMQKLLGKDAN

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6401\\_c09.zip](https://cdn.origene.com/chromatograms/mk6401_c09.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_139201

**ORF Size:** 1413 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\\_139201.1](#), [NP\\_631940.1](#)
**RefSeq Size:** 2357 bp

**RefSeq ORF:** 1416 bp

**Locus ID:** 9815

**Cytogenetics:** 12q24.11

**Domains:** ArfGap, ANK

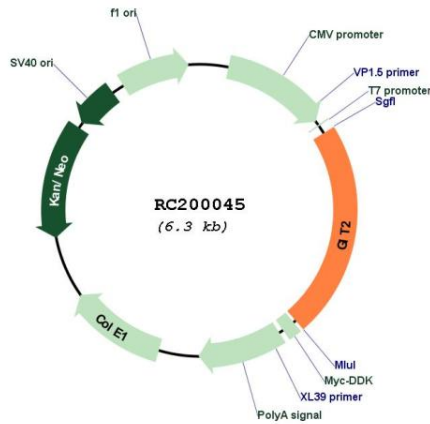
**Protein Families:** Druggable Genome

**Protein Pathways:** Endocytosis

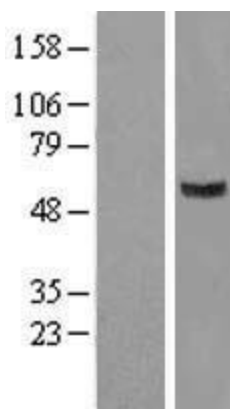
**MW:** 52.6 kDa

**Gene Summary:** This gene encodes a member of the GIT protein family, which interact with G protein-coupled receptor kinases and possess ADP-ribosylation factor (ARF) GTPase-activating protein (GAP) activity. GIT proteins traffic between cytoplasmic complexes, focal adhesions, and the cell periphery, and interact with Pak interacting exchange factor beta (PIX) to form large oligomeric complexes that transiently recruit other proteins. GIT proteins regulate cytoskeletal dynamics and participate in receptor internalization and membrane trafficking. This gene has been shown to repress lamellipodial extension and focal adhesion turnover, and is thought to regulate cell motility. This gene undergoes extensive alternative splicing to generate multiple isoforms, but the full-length nature of some of these variants has not been determined. The various isoforms have functional differences, with respect to ARF GAP activity and to G protein-coupled receptor kinase 2 binding. [provided by RefSeq, Sep 2008]

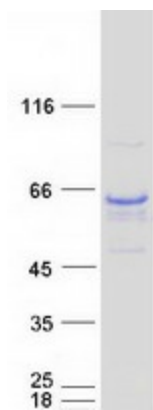
**Product images:**



Circular map for RC200045



Western blot validation of overexpression lysate (Cat# [LY408350]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200045 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GIT2 protein (Cat# [TP300045]). The protein was produced from HEK293T cells transfected with GIT2 cDNA clone (Cat# RC200045) using MegaTran 2.0 (Cat# [TT210002]).