

## Product datasheet for **MR207441**

### **G3bp1 (NM\_013716) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	G3bp1 (NM_013716) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	G3bp1
Synonyms:	A1849976; B430204O07; C87777; G3bp; mKIAA4115
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR207441 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTTATGGAGAAGCCTAGTCCCTGCTGGTCGGCGGGAGTTGTGCGACAGTACTACACTCTGCTGA  
 ACCAGGCCCGGACATGTTGCACAGATTTTATGGAAGAAGTCTTCTATGCCACGGGGCTTGGATTC  
 CAACGGGAAGCCAGCAGATGCAGTCTACGGCAGAAAGAAATCCACAGAAAGTATGTCACAAAATTC  
 ACCAACTGCCACCAAGATCCGCCACGTGGATGCTCACGCAACTCTGAATGACGGGGTGGTGGTCCAAG  
 TGATGGGGCTACTGTCCAACAACAACAGGCTCTGCGGAGTTTATGCAGACCTTTGCTTGTCTCTGA  
 GGGCTCTGTTGCCAACAAATCTATGTTACAACGACATCTTCAGGTACCAAGATGAGGTCTTCGGTGGC  
 TTTGTCACAGAGCCTCAAGAGGAATCCGAGGAAGAAGTAGAAGAAGTGAAGAAAGACAGCAGACACCAG  
 AGGTGGTGCCTGATGATTCTGGAATTTCTATGATCAGACTGTCAGCAATGACTTGGAGGAGCATTTAGA  
 GGAGCCTGTAGTGAACCAAGACCGGAGCCAGAGCCGGAGCCGGAGCCGGAACCTGTGTCCGACATTC  
 GAGGACAAGCCTGAGGCTGCATTGGAAGAAGTCTCCGACGATGTGCAGAAGAGCACTCCCCCGCCC  
 CGGCTGATGTGGCCCCGGCACAGGAGGACTTGAGGACGTTTTCTTGGGCATCTGTGACGAGTAAGAACCT  
 TCCTCCCAGTGGGGCTGTTCCAGTGACGGGGACACCACCTCATGTGGTCAAAGTGCCAGCGTCACAGCCC  
 CGTCCAGAATCTAAACCTGACTCTCAGATCCCACCACAAAGGCCCTCAGAGAGATCAGAGAGTTCGAGAGC  
 AGCGAATCAATATCCCTCCTCAGAGAGGACCCCGACCAATCCGTGAGGCTGGTGAACCAGGAGATGTGGA  
 ACCTCGAAGGATGGTGAAGCACCTGACAGTACCAGCTCTTATTGGAACTGCCACATGAGGTGGG  
 AAGTCGGAAGTGAAGGATTTTTTCCAAAATTTGGCAATGTGGTGGAGCTGCGCATCAACAGTGGTGGGA  
 AGTTACCAATTTCCGTTTTGTTGTTGATGATTCTGAACCTGTTGAGAAGTCTTAGTAATAGGCG  
 CATCATGTTCCGAGGCGCGGTCCGCTGAATGTGGAAGAGAAGAAGACTCGAGCTGCCAGAGAAGCGCAC  
 CGCAGGGATAACCGCCTTCGGGGACCTGGAGGCCCCCGTGGTGGGCCGAGTGGTGGGATGAGAGGCCCT  
 CCCCGGAGGCATGGTGCAGAAACCAGGCTTTGGCGTGGGCAGGGGGATTACAACCTCAAGGCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR207441 protein sequence  
 Red=Cloning site Green=Tags(s)

MVMEKPSPLLVGREFVRQYYTLLNQAPDMLHRFYGKNSSYAHGGLDSNGKPADAVYGQKEIHRKVMSONF  
 TNCHTKIRHVDHATLNDGVVVQVMGLL SNNNQALRRFMQTFVLAPEGSVANKFYVHNDIFRYQDEVFGG  
 FVTEPQEESEEEVEEPEERQQTPEVVPDSSGTFYDQTVSNDLEEHLEEPVVEPEPEPEPEPEVSDIQ  
 EDKPEAALEEAAPDDVQKSTSPAPADVAPAQEDLRTFSWASVTSKNLPPSGAVPVTGTPPHVVKVPASQP  
 RPESKPDSSQIPPQRQRDQVRVREQRINIPQRGPRPIREAGEPGDVEPRRMVRHPDASHQLFIGNLPHEVD  
 KSELKDFQNFNGNVVELRINSGGKLPNFGFVVFDDSEPVQKVL SNRPI MFRGAVRLNVEEKKTRAAREGD  
 RRDNRRLRGPGRGPPSGGMRGPPRGGMVQKPGFVGRGITTPRQ

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_013716

**ORF Size:** 1395 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](mailto: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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

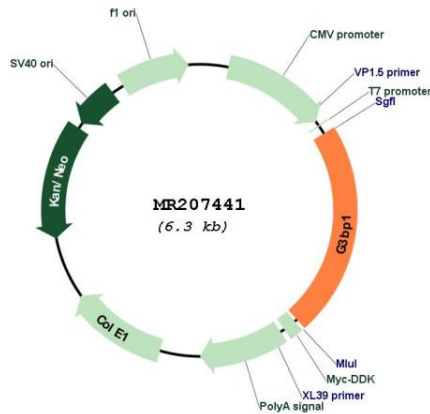
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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\\_013716.2, NP\\_038744.1](#)  
**RefSeq Size:** 2685 bp  
**RefSeq ORF:** 1398 bp  
**Locus ID:** 27041  
**UniProt ID:** [P97855](#)  
**Cytogenetics:** 11 B1.3  
**MW:** 51.8 kDa

**Gene Summary:** ATP- and magnesium-dependent helicase that plays an essential role in innate immunity. Participates in the DNA-triggered cGAS/STING pathway by promoting the DNA binding and activation of CGAS. Enhances also DDX58-induced type I interferon production probably by helping DDX58 at sensing pathogenic RNA. In addition, plays an essential role in stress granule formation. Unwinds preferentially partial DNA and RNA duplexes having a 17 bp annealed portion and either a hanging 3' tail or hanging tails at both 5'- and 3'-ends. Unwinds DNA/DNA, RNA/DNA, and RNA/RNA substrates with comparable efficiency. Acts unidirectionally by moving in the 5' to 3' direction along the bound single-stranded DNA. Phosphorylation-dependent sequence-specific endoribonuclease in vitro (PubMed:11604510). Cleaves exclusively between cytosine and adenine and cleaves MYC mRNA preferentially at the 3' UTR (PubMed:11604510).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR207441