

## Product datasheet for **RC223933**

### ZNF207 (NM\_003457) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ZNF207 (NM_003457) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ZNF207
Synonyms:	BuGZ; hBuGZ
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC223933 representing NM\_003457  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGTCGAAGAAGAAGAAGCAGCTGAAGCCGTGGTCTGGTATTGTAATAGAGATTTTGTATGATGAGA  
 AGATCCTTATTCAGCACAAAAAGCAAAGCATTAAATGCCATATATGTCACAAGAAATTTGATACAGG  
 ACCTGGCTTAGCTATTCATTGCATGCAGGTACATAAAGAAACAATAGATGCCGTACCAAATGCAATACCT  
 GGAAGAACAGACATAGAGTTGGAATATATGGTATGGAAGGTATTCAGAAAAAGACATGGATGAAAGAC  
 GACGACTTCTTGAACAGAAAAACAAGAAAGTCAAAAAAGAAGCAACAAGATGATTCTGATGAATATGA  
 TGATGACGACTCTGCAGCCTCACTTCATTTTCAGCCACAGCCTGTTCAACCTCAGCAAGTTATATTCT  
 CCAATGGCACAGCCAGGACTGCCACCAGTACCAGGAGCACCAGGAATGCCTCCAGGCATACCTCCATTAA  
 TGCCAGGTGTTCTCTCTGATGCCAGGAATGCCACCAGTTATGCCAGGCATGCCACCTGGAATGATGCC  
 AATGGGTGGAATGATGCCACCTGGACCAGGAATACCACCTCTGATGCCTGGAATGCCACCAGGTATGCC  
 CCACCTGTTCCACGTCTGGAATTCCTCCAATGACTCAAGCACAGGCTGTTTCAGCGCCAGGTATTCTTA  
 ATAGACCACCTGCACCAACAGCAACTGTACCTGCCCCACAGCCTCCAGTTACTAAGCCTCTTTCCCCAG  
 TGCTGGACAGATGGGGACACCTGTCAAGCTCAAGTACAGCTTCATCCAATTCAGAAAGCTGTCTGCA  
 TCTTCTAAAGCTCTGTTTCTAGCACAGCACAAGCTCAGGCAGCTGTCCAAGGACCTGTTGGTACAGATT  
 TCAAACCTTAAATAGTACCCCTGCAACAACACTACAGAACCCCAAGCCTACATTCCTGCTTATACACA  
 GTCTACAGCTTCAACAACACTAGTACAACAATAGTACTGCAGCTAAACCAGCGGCTCAATAACAAGTAA  
 CCTGCTACACTTACAACAACACTAGTGAACCAGTAAAGTTGATCCATCCAGATGAGGATATATCCCTGGA  
 AGAGAAGGGCACAGTTACCTAAGTATCAACGTAATCTTCTCGGCCAGGACAGGCCCATCGGTAATCC  
 ACCAGTTGGACCAATTGGAGGTATGATGCCACCACAGCCAGGCATCCACAGCAACAAGGAATGAGACCC  
 CCAATGCCACCTCATGGTCAGTATGGTGGTTCATCAAGGCATGCCAGGATACCTTCTGGTGCTATGC  
 CCCCATGATGGGCAGGACCGCAATGGTGCCCTTACCAGGGTGGGCTCCTCGACCTCCGATGGGAAT  
 GAGACCTCTGTAATGTCGCAAGGTGGCCGTTAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC223933 representing NM\_003457  
 Red=Cloning site Green=Tags(s)

MGRKKKKQLKPCWYCNRDFDDEKILIQHQKAKHFKCHICHKLYTGPGLAIHCMQVHKETIDAVPNAIP  
 GRTDIELEIYGMGIPEKMDERRRLLLEQKTQESQKKKQDDSDYDDDDSAASTSFQPQPVQPQGYIP  
 PMAQPLPPVPGAPGMPPGIPPLMPGVPLMPGMPPVMPGMPPGMMPMGMMPPGPIPLMPGMPPGMP  
 PPVPRGIPPMTQAQAVSAPGILNRPPAPTATVPAPQPPVTKPLFPSAGQMGPVTSSTASSNSESLSA  
 SSKALFPSTAQAQAAVQGPVGTDFKPLNSTPATTTEPPKPTFPAYTQSTASTTSTNSTAAKPAASITSK  
 PATLTTTSATSKLIHPDEDISLEERRAQLPKYQRNLPRPGQAPIGNPPVGPIGMMPPQGPQPQGMRP  
 PMPPHQYVGGHHQMPGYLPGAMPYVGGPPMPPYQGGPPRPPMGMPPVMSQGGRY

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

**ACCN:**

NM\_003457

**ORF Size:**

1434 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).

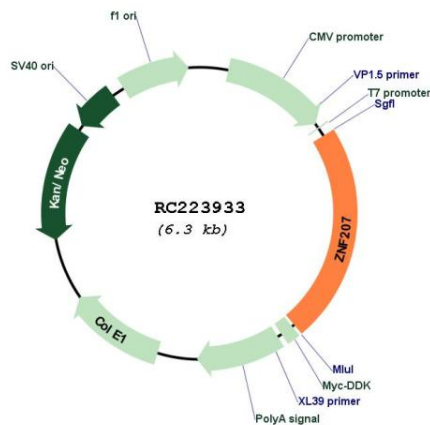
**Reconstitution Method:**

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\\_003457.3](#)  
**RefSeq Size:** 2347 bp  
**RefSeq ORF:** 1437 bp  
**Locus ID:** 7756  
**UniProt ID:** [O43670](#)  
**Cytogenetics:** 17q11.2  
**Domains:** zf-C2H2  
**Protein Families:** Transcription Factors  
**MW:** 50.6 kDa

**Gene Summary:** Kinetochole- and microtubule-binding protein that plays a key role in spindle assembly (PubMed:24462186, PubMed:24462187, PubMed:26388440). ZNF207/BuGZ is mainly composed of disordered low-complexity regions and undergoes phase transition or coacervation to form temperature-dependent liquid droplets. Coacervation promotes microtubule bundling and concentrates tubulin, promoting microtubule polymerization and assembly of spindle and spindle matrix by concentrating its building blocks (PubMed:26388440). Also acts as a regulator of mitotic chromosome alignment by mediating the stability and kinetochole loading of BUB3 (PubMed:24462186, PubMed:24462187). Mechanisms by which BUB3 is protected are unclear: according to a first report, ZNF207/BuGZ may act by blocking ubiquitination and proteasomal degradation of BUB3 (PubMed:24462186). According to another report, the stabilization is independent of the proteasome (PubMed:24462187).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RC223933