

## Product datasheet for MR226889

### Bub1 (NM\_001113179) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Bub1 (NM_001113179) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Bub1
Synonyms:	AL022991; Bub1a; C80208; D2Xrf87
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR226889 representing NM_001113179 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

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GCCCAGTTTCAAAAAATGCAGTATCTTCGGGAGATTGGGGAGTTAAAAAATTATGACTTTGTCATCTG
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**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
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**Protein Sequence:**

>MR226889 representing NM\_001113179  
Red=Cloning site Green=Tags(s)

```
MDNLENVFRMF EAHMQSYTGNDPLGEWESFIKWEENFPDNKEYLMTLLEHLMKEFLHKKNYHNSRFIN
YCLKFAEYNSDRHQFFFLYNQIGTKSSYIYMSWAGHLEAQGELQHASAIFQTGIHNEAEPKELLQQQY
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RVIMISKSECSVSSVAPKPEAQVQMYCKEKLIRGDSEFSFEELRAQKYNQRKKHEQWVSEDRNYMKRKE
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LSEYKRSRK
```

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mm9009\\_b05.zip](https://cdn.origene.com/chromatograms/mm9009_b05.zip)

Restriction Sites: Sgfl-MluI

Cloning Scheme:



ACCN: NM\_001113179

ORF Size: 3177 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\\_001113179.1](#), [NP\\_001106650.1](#)

RefSeq Size: 4337 bp

RefSeq ORF: 3180 bp

Locus ID: 12235

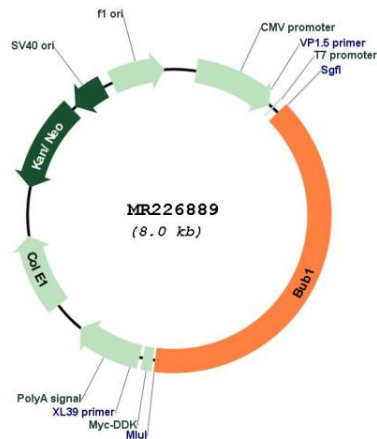
UniProt ID: [O08901](#)

**Cytogenetics:** 2 62.1 cM  
**MW:** 120.2 kDa

**Gene Summary:**

Serine/threonine-protein kinase that performs 2 crucial functions during mitosis: it is essential for spindle-assembly checkpoint signaling and for correct chromosome alignment. Has a key role in the assembly of checkpoint proteins at the kinetochore, being required for the subsequent localization of CENPF, BUB1B, CENPE and MAD2L1. Required for the kinetochore localization of PLK1. Required for centromeric enrichment of AUKRB in prometaphase. Plays an important role in defining SGO1 localization and thereby affects sister chromatid cohesion. Acts as a substrate for anaphase-promoting complex or cyclosome (APC/C) in complex with its activator CDH1 (APC/C-Cdh1). Necessary for ensuring proper chromosome segregation and binding to BUB3 is essential for this function. Can regulate chromosome segregation in a kinetochore-independent manner. Can phosphorylate BUB3. The BUB1-BUB3 complex plays a role in the inhibition of APC/C when spindle-assembly checkpoint is activated and inhibits the ubiquitin ligase activity of APC/C by phosphorylating its activator CDC20. This complex can also phosphorylate MAD1L1. Kinase activity is essential for inhibition of APC/CCDC20 and for chromosome alignment but does not play a major role in the spindle-assembly checkpoint activity. Mediates cell death in response to chromosome missegregation and acts to suppress spontaneous tumorigenesis. Essential during early and later stages of embryonic development. Necessary for postimplantation embryogenesis and proliferation of primary embryonic fibroblasts and plays an important role in spermatogenesis and fertility.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR226889