

## Product datasheet for **MG224467**

### Mdc1 (NM\_001010833) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mdc1 (NM_001010833) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mdc1
Synonyms:	6820401C03; AA413496; mKIAA0170; NFBD; Nfbd1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG224467 representing NM_001010833 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAAGCACCCAGGTGATTGACTGGGATGCTGAAGAAGAGGAAGAGACAGAATCCAGTGGCTCCT  
TGGGGTATAGTGTGGAGCCTATAGGGCAGCTACGTCTCTTCAGTGGAACTCATGGACCAGAAAGAGATTT  
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GCCTCAATGGCACTCAAATCGTAAAGCCCTCCTAGGGTCTACCTCTGGAGTGAGCCATCGTCTGAGGGA  
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CCTCGGAGTCTTCTAACTATAGAGAAAACCCCAAGTACGGATAGAATCCAAAATCCAGAGTTTGT  
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GATATGAGCTCCCCTGGCAGCCATCTAGTGGTAAATCAGGCCTCCTTTGCTGTGGTAGGCAAGACCAGAG  
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 CCTGAGTCTCCTGACTGGAGTGTGAAGCAGGAAGCCACACCAGAGGCCTTTGTTCTCCAATTTGG

AAATGTCATCTACC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>MG224467 representing NM\_001010833

Red=Cloning site Green=Tags(s)

MESTQVIDWDAEEEEETEELSSGSLGYSVEPIGQLRFLFSGTHGPERDFPLYLGKNVVGRSPDCSVALPFPSP  
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 RKRRAAGKQGSRTVPLGHKSYSALSEPEPQSSASQSSGASEADSPRQKRRRQASQKTVVIKEEPVETEV  
 KEEPQETAIPTPEKRRKRDHAEVTVQKPTRSRRTKPNQETAPKVLFTGVMSRGERAVLALGGSLASSVN  
 EASHLVTDRIIRRTVKFLCALGKIPILSLNWLQSRKAGCFLPPDDYLVTDPQEKNFSFLRDSLCLRAR  
 ERRRLLEDYEIHVTPGVQPPPPQMGEIISCCGGTFLSPMPHSYKLRVVIITCTEDLPRCAIPSRGLPLLS  
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TRTRPLE – GFP Tag – V

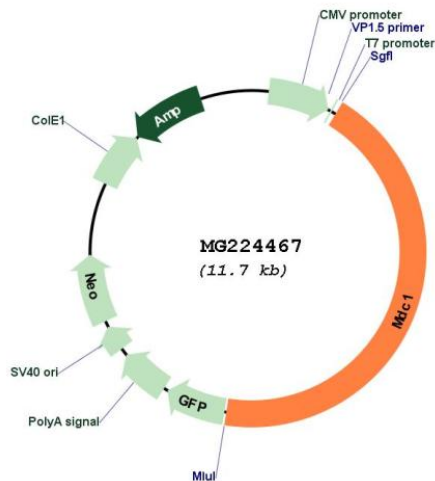
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001010833

ORF Size: 5124 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\\_001010833.2](#), [NP\\_001010833.2](#)

**RefSeq Size:** 7372 bp

**RefSeq ORF:** 5127 bp

**Locus ID:** 240087

**UniProt ID:** [Q5PSV9](#)

**Cytogenetics:** 17 B1

**Gene Summary:** The protein encoded by this gene contains an N-terminal forkhead domain, two BRCA1 C-terminal (BRCT) motifs and a central domain with 7 divergent copies of an approximately 41-amino acid sequence. The encoded protein is required to activate the intra-S phase and G2/M phase cell cycle checkpoints in response to DNA damage. This nuclear protein interacts with phosphorylated histone H2AX near sites of DNA double-strand breaks through its BRCT motifs, and facilitates recruitment of the ATM kinase and meiotic recombination 11 protein complex to DNA damage foci. Mice with mutations in this gene exhibit growth retardation, male infertility, immune defects, chromosome instability, DNA repair defects, and radiation sensitivity. [provided by RefSeq, Jul 2008]