

Product datasheet for **RR217573**

Mdc1 (NM_001166275) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mdc1 (NM_001166275) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mdc1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR217573 representing NM_001166275 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

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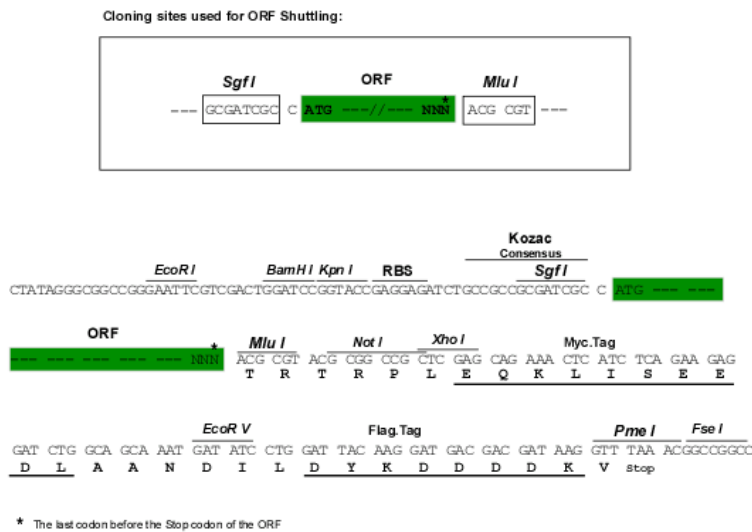
Protein Sequence: >RR217573 representing NM_001166275
 Red=Cloning site Green=Tags(s)

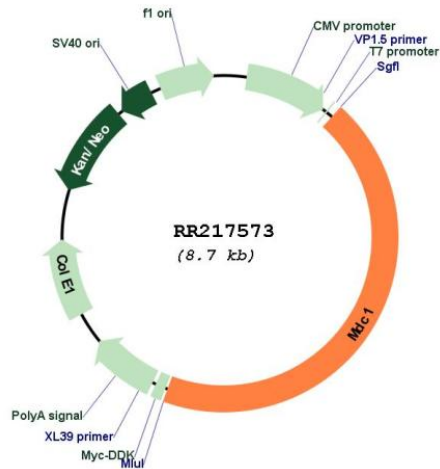
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Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001166275

ORF Size: 3837 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_001166275.1](#), [NP_001159747.1](#)

RefSeq Size: 4072 bp

RefSeq ORF: 3840 bp

Locus ID: 309595

UniProt ID: [Q5U2M8](#)

Cytogenetics: 20p12

MW: 136.9 kDa

Gene Summary: Required for checkpoint mediated cell cycle arrest in response to DNA damage within both the S phase and G2/M phases of the cell cycle. May serve as a scaffold for the recruitment of DNA repair and signal transduction proteins to discrete foci of DNA damage marked by 'Ser-139' phosphorylation of histone H2AFX. Also required for downstream events subsequent to the recruitment of these proteins. These include phosphorylation and activation of the ATM, CHEK1 and CHEK2 kinases, and stabilization of TP53 and apoptosis. ATM and CHEK2 may also be activated independently by a parallel pathway mediated by TP53BP1 (By similarity).
[UniProtKB/Swiss-Prot Function]