

## Product datasheet for **RC223039**

### ATM (NM\_000051) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ATM (NM_000051) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATM
Synonyms:	AT1; ATA; ATC; ATD; ATDC; ATE; TEL1; TELO1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC223039 representing NM_000051. Blue=ORF Red=Cloning site Green=Tag(s)

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**Protein Sequence:** >Peptide sequence encoded by RC223039  
 Blue=ORF Red=Cloning site Green=Tag(s)

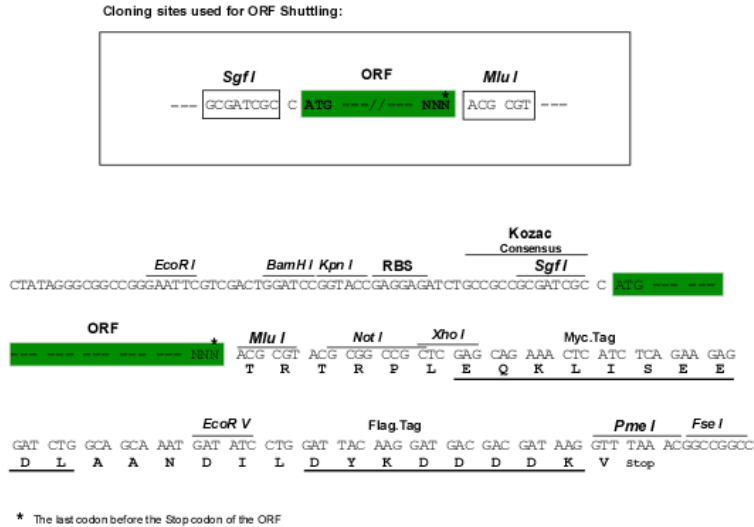
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IKQYNSVSCGVSEWQLEEAQVFWAKKEQSLALSILKQMIKKLDASCAANNPSLKLTYTECLRVCGNWL
ETCLENPAVIMQTYLEKAVEVAGNYDGESSDEL RNGKMKAFSLARFSDTQYQRIENYMKSSFEFNKQA
LLKRAKEEVGLLREHKIQTNRYTVKVQRELEDELALRALKEDRKRFLCKAVENYINCLLSGEEHDMWV
FRLCSLWLENSGVSEVNGMMKRDGMKIPTYKFLPLMYQLAARMGTKMMGGLGFHEVLNLLISRISMDHP
HHTLFIIILALANANRDEF LTKPEVARRSRITKNVPKQSSQLDED RTEAANRIICTIRSRPQMVRVSEA
LCDAYIILANLDATQWKTQRKGINIPADQPI TKLNLEDVVVPTMEIKVDHTGEYGNLVTIQSFKAEFR
LAGGVNLPKIIDCVGSDGKERRQLVKGRDDL RQDAVMQQVFQMCNTLLQRNTETRKRKLTICTYKVVPL
SQRSGVLEWCTGTVP IGEFLVNNEDGAHKRYRPNDFAFQCQKMMEVQKKSFEKEYEVFMDVCQNFQP
VFRYFCMEKFLDPAIWFEKRLAYTRSVATSSIVGYILGLGDRHVQNILINEQSAELVHIDLGVAFEQ GK
ILPTPETVPFRLTRDIVDGMGITGVEGVFRRCC EKTMEVMRNSQETLLTIVEVLLYDPLFDWMTMPLKA
LYLQORPEDETELHPTLNADDQECKRNLSDIDQSFNKVAERVLMRLQEKLKGVEEGTVLSVGGQVNL LI
QQAIDPKNLSRLFPGWKAW
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV
  
```

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg7740\\_b05.zip](https://cdn.origene.com/chromatograms/mg7740_b05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000051

**ORF Size:** 9168 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.

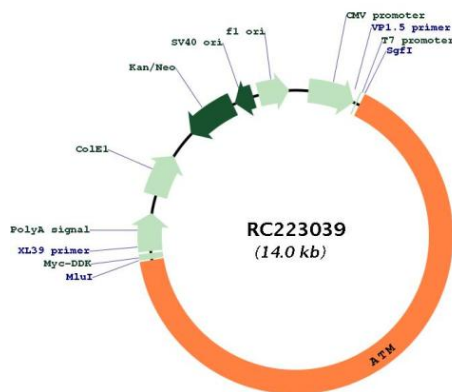
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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\\_000051.4](#)  
**RefSeq Size:** 13147 bp  
**RefSeq ORF:** 9171 bp  
**Locus ID:** 472  
**UniProt ID:** [Q13315](#)  
**Cytogenetics:** 11q22.3  
**Protein Families:** Druggable Genome, Protein Kinase, Transcription Factors  
**Protein Pathways:** Apoptosis, Cell cycle, p53 signaling pathway  
**MW:** 350.7 kDa

**Gene Summary:** The protein encoded by this gene belongs to the PI3/PI4-kinase family. This protein is an important cell cycle checkpoint kinase that phosphorylates; thus, it functions as a regulator of a wide variety of downstream proteins, including tumor suppressor proteins p53 and BRCA1, checkpoint kinase CHK2, checkpoint proteins RAD17 and RAD9, and DNA repair protein NBS1. This protein and the closely related kinase ATR are thought to be master controllers of cell cycle checkpoint signaling pathways that are required for cell response to DNA damage and for genome stability. Mutations in this gene are associated with ataxia telangiectasia, an autosomal recessive disorder. [provided by RefSeq, Aug 2010]

### Product images:



Circular map for RC223039