

Product datasheet for RC211894

ATM (NM_138292) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: ATM (NM_138292) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: ATM
Synonyms: AT1; ATA; ATC; ATD; ATDC; ATE; DKFZp781A0353; MGC74674; TEL1; TELO1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC211894 representing NM_138292
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGGATCGCC

ATGACGTTACATGAGCCAGCAAATTCTAGTGCCAGTCAGAGCACTGACCTCTGTGACTTTTCAGGGGATT
 TGGATCCTGCTCCTAATCCACCTCATTTTCCATCGCATGTGATTAAGCAACATTTGCCATATCAGCAA
 TTGTCATAAAAACCAAGTTAAAAAGCATTTTAAAAATTTCCAAAAGCCCTGATTCCTATCAGAAAATT
 CTTCTTGCCATATGTGAGCAAGCAGCTGAAACAAATAATGTTTATAAGAAGCACAGAATTCCTAAAATAT
 ATCACCTGTTTGTAGTTTATTACTGAAAGATATAAAAAGTGGCTTAGGAGGAGCTTGGGCCTTTGTTCT
 TCGAGACGTTATTATACTTTGATTCACTATATCAACCAAGGCCCTTCTGTATCATGGATGTGCATTA
 CGTAGCTTCTCCCTTTGTGTGACTTATTAAGTCAGGTTTGCAGACAGCCGTGACTTACTGTAAGGATG
 CTCTAGAAAACCATCTTCATGTTATTGTTGGTACACTTATACCCCTTGTGTATGAGCAGGTGGAGTTCA
 GAAACAGGTATTGGACTTGTGAAATACTTAGTGATAGATAACAAGGATAATGAAACCTCTATACACG
 ATTAAGCTTTTAGATCCTTTCCGACCATGTTGTTTTAAGGATTTGCGTATTACTCAGCAAAAAATCA
 AATACAGTAGAGGACCTTTTCACTCTTGGAGGAAATTAACCATTTTCTCTCAGTAAGTGTATGATGC
 ACTTCCATTGACAAGACTTGAAGGACTAAAGGATCTTCGAAGACAACCTGGAACACTACATAAGATCAGATG
 GTGGACATTATGAGAGCTTCTCAGGATAATCCGCAAGATGGGATTATGGTAAAAGTAAAGTGTCAATTTGT
 TGCAGTTATCCAAGATGGCAATAAACCCACTGGTGAAAAGAAGTTCTAGAGGCTGTTGGAAGCTGCTT
 GGGAGAAGTGGTCCATAGATTTCTCTACCATAGCTATACAACATAGTAAAGATGCATCTTATACCAAG
 GCCCTTAAGTTATTTGAAGATAAAGAACTTCAAGTGGACCTTCATAATGCTGACCTACCTGAATAACACAC
 TGGTAGAAGATTGTCAAAGTTGATCAGCAGCTGTTACCTGTTTGAAAAACATTTTAGCCACAAAAGAC
 TGGACATAGTTTCTGGGAGATTTATAAGATGACAAACAGATCCAATGCTGGCCTATCTACAGCCTTTTGA
 ACATCAAGAAAAAGTTTTTGAAGTACCCAGATTTGACAAGAAAAACCTTTTGAAGGCTGGATGATA
 TAAATCTGTGGATTCCTCAAGTAAAAATCATGACATTTGGATAAAGACTGACTTGTGCTTTTTTGA
 CAGTGGAGGCACAAAATGTGAAATCTTCAATTATTAAGCCAATGTGTGAAGTAAAAGTAAACTGACTTTTGT



[View online »](#)

CAGACTGTA CTCCATACTTGATTTCATGATATTTTACTCCAAGATACAAATGAATCATGGAGAAATCTGC
 TTTCTACACATGTTTCAGGGATTTTTCCACAGCTGTCTTCGACACTTCTCGCAAACGAGCCGATCCACAAC
 CCCTGCAAACCTGGATTTCAGAGTCAGAGCACTTTTTCCGATGCTGTTGGATAAAAAATCACAAAGAACA
 ATGCTTGTCTGTTGGACTACATGAGAAGACAAAAGACCTTCTTCAGGAACAATTTTTAATGATGCTT
 TCTGGCTGGATTTAAATATCTAGAAGTTGCCAAGGTAGCTCAGTCTTGTGCTGCTCACTTTACAGCTTT
 ACTCTATGCAGAAATCTATGCAGATAAGAAAAGTATGGATGATCAAGAGAAAAGAAGTCTTGCATTTGAA
 GAAGGAAGCCAGAGTACAACATTTCTAGCTTGAGTGAAAAAGTAAAGAAGAACTGGAATAAGTTTAC
 AGGATCTTCTCTTAGAAATCTACAGAAGTATAGGGGAGCCAGATAGTTTGTATGGCTGTGGTGGAGGGAA
 GATGTTACAACCCATTACTAGACTACGAACATATGAACACGAAGCAATGTGGGGCAAAGCCCTAGTAACA
 TATGACCTCGAAACAGCAATCCCCTCATCAACACGCCAGGCAGGAATCATTACAGGCCCTGCAGAATTTGG
 GACTCTGCCATATTTTCCGTCTATTTAAAAGGATTGGATTATGAAAATAAGACTGGTGTCTGAACT
 AGAAGAACTTCATTACCAAGCAGCATGGAGGAATATGCAGTGGGACCATTGCACTTCCGTGAGCAAAAGAA
 GTAGAAGAACCGATTACCATGAATCATTGTACAATGCTCTACAATCTCTAAGAGACAGAGAATTTCTCTA
 CATTTTATGAAAGTCTCAATATGCCAGAGTAAAAGAAGTGAAGAGATGTGAAGCGCAGCCTTGAGTC
 TGTGATTCGCTCTATCCACACTTAGCAGGTTGCAGGCCATTGGAGAGCTGAAAAGCATTGGGGAGCTT
 TTCTCAAGATCAGTCACACATAGACAACCTCTGAAGTATATATTAAGTGGCAGAAAACCTCCAGCTTC
 TCAAGGACAGTGATTTTGTGTTTTCAGGAGCCTATCATGGCTCTACGCACAGTCATTTTGGAGATCCTGAT
 GGAAAAGGAAATGGACAACCTCACAAAGAGAATGTATTAAGGACATTTCCACAAACACCTTGTAGAACTC
 TCTATACTGGCCAGAACCTTCAAGAACCTCAGCTCCCTGAAAGGGCAATATTTCAAATTAACAGTACA
 ATTCAGTTAGCTGTGGAGTCTCTGAGTGGCAGCTGGAAGAAGCACAAGTATTTCTGGGCAAAAAGGAGCA
 GAGTCTTGCCCTGAGTATTTCAAGCAAATGATCAAGAAGTTGGATGCCAGCTGTGCAGCGAACAATCCC
 AGCCTAAAACCTACATACACAGAATGTCTGAGGGTTTGTGGCACTGGTTAGCAGAAAACCTGTCTAGAAA
 ATCTCTGCGGTATCATGCAGACTATCTAGAAAAGGCAGTAGAAGTTGCTGGAAAATATGATGGAGAAAAG
 TAGTGATGAGCTAAGAAATGAAAAATGAAGGCATTTCTCTCATTAGCCCGGTTTTTCAGATACTCAATAC
 CAAAGAATTGAAAACATGAAATCATCGAATTTGAAAACAAGCAAGCTCTCTGAAAAGAGCCAAAG
 AGGAAGTAGGCTCTCTTAGGGAACATAAAATTCAGACAAACAGATACACAGTAAAGGTTACAGCGAGAGCT
 GGAGTTGGATGAATTAGCCCTGCGTGCCTGAAAGAGGATCGTAAACGCTTCTTATGTAAGCAGTTGAA
 AATTATCAACTGCTTATTAAGTGGAGAAGAACATGATATGGGGTATTCGACTTTGTTCCCTCTGGC
 TTGAAAATTTGGAGTTTCTGAAGTCAATGGCATGATGAAGAGAGACGGAATGAAGATCCAACATATAA
 ATTTTTGCCTCTATGTACCAATGGCTGCTAGAATGGGACCAAGATGATGGGAGGCTAGGATTTTCAT
 GAAGTCTCAATAATCTAATCTCTAGAATTTCAATGGATCACCCCATCACACTTTGTTTATTACTGG
 CCTTAGCAAATGCAAACAGAGATGAATTTCTGACTAAACCAAGGTTAGCCAGAAGAGCAGAATAACTAA
 AAATGTGCCTAAACAAAGCTCTCAGCTTGTAGGATCGAACAGAGGCTGCAAAATAGAATAATATGTA
 ATCAGAAGTAGGAGACCTCAGATGGTCAGAAGTGTGAGGCACCTTGTGATGCTTATATTATATTAGCAA
 ACTTAGATGCCACTCAGTGGAAAGCTCAGAGAAAAGGCATAAAATATTCCAGCAGACCAGCCAATTA
 ACTTAAGAATTTAGAAGATGTTGTTGTCCTACTATGAAATTAAGGTGGACCACACAGGAGAATATGGA
 AATCTGGTGACTATACAGTCATTTAAAGCAGAAATTTGCTTAGCAGGAGGTGTAATTTACAAAAATAA
 TAGATTGTGAGGTTCCGATGGCAAGGAGAGGAGACAGCTTGTAAAGGGCCGTGATGACCTGAGACAAGA
 TGCTGTATGCAACAGGCTTCCAGATGTGTAATACATTAAGTACTGCAGAGAAAACCGAAAACCTAGGAAGG
 AAATTAACATATCTGTACTTATAAGGTGGTTCCCTCTCTCAGCGAAGTGGTGTCTTGAATGGTGCACAG
 GAACTGTCCCATTTGGTGAATTTCTGTTAACAATGAAGATGGTGTCTATAAAAGATACAGGCCAAATGA
 TTTTCAGTGCCTTTCAGTGCCAAAAGAAAATGATGGAGGTGCAAAAAAGTCTTTTGAAGAGAAAATGAA
 GTCTTCATGGATGTTTGCCAAAATTTTCAACCAGTTTTCCGTTACTTCTGCATGGAAAAATTTCTGGATC
 CAGCTATTTGGTTTGAAGCGATTGGCTTATACGCGCAGTGTAGCTACTTCTTCTATTGTTGGTTACAT
 ACTTGGACTTGGTATAGACATGTACAGAATATCTTGATAAATGAGCAGTCAGCAGAACTGTACATATA
 GATCTAGGTGTTGCTTTTGAACAGGGCAAAATCCTTCTACTCCTGAGACAGTTCCTTTTAGACTCACCA
 GAGATATTGTGGATGGCATGGGCATTACGGGTGTTGAAGGTGCTTCAGAAGATGCTGTGAGAAAACCAT
 GGAAGTATGAGAACTCTCAGGAACTCTGTTAACCATTGTAGAGGTCTTCTATATGATCCACTCTTT
 GACTGGACCATGAATCCTTTGAAAGCTTTGATTTACAGCAGAGGCCGGAAGATGAAACTGAGCTTCACC
 CTACTCTGAATGCAGATGACCAAGAATGCAAAACGAAATCTCAGTGATATTGACCAGAGTTTCAACAAAGT
 AGCTGAACGTGTCTAATGAGACTACAAGAGAACTGAAAGGAGTGAAGAAGGCACTGTGCTCAGTGT
 GGTGGACAAGTGAATTTGCTCATACAGCAGGCCATAGACCCCAAAAATCTCAGCCGACTTTTCCAGGAT

GGAAAGCTTGGGTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC211894 representing NM_138292
Red=Cloning site Green=Tags(s)

MTLHEPANSSASQSTDLCDFSGDLDPA PNPFP SHVIKATFAYISNCHKTKLKSILEILSKSPDSYQKI
LLAICEQAAETNNVYK KHRILKIYHLFVSLLLKDIKSGLGAWAFVLRDVIYTLIHYINQRPSCIMDVSL
RSFSLCCDLLSQVCQTA VTYCKDALENHLHVIVGTLIPLVYEQVEVQKQVLDLLKYLVIDNKDNENLYIT
IKLLDPFPDHVVKDLRITQ QKIKYSRGPFSLEEINHFLSVSVYDALPLTRLEGLKDLRRQLELHKDQM
VDIMRASQDNPDQ GIMVKLVNLLQLSKMAINHTGEKEVLEAVGSCLGEVGPIDFSTIAIQHSDASYTK
ALKLFEDKELQWTFIMLTYLNNTLVEDCVKVRSAAVTCLKNILATKTGHSFWEIYKMTTDPMLAYLQPF
TSRKKFLEVPRFDKENPF EGLDDINLWIPLSENHDIWIKTLTCAFLDSGGTKCEILQLLKPMCEVKTDFC
QTVLPYLIHDILLQD TNESWRNLLSTHVQGFSTSLRHFQSRTSRSTTPANLDSESEHFFRCLDKKSQRT
MLAVVDYMRQRKPSSGT IFNDAFWLDLNYLEVAKVAQSCAAHFTALLYAEIYADKKSMDQEKRSLAFE
EGSQSTTISSLSEKSKEETGISLQDLLLEIYRSIGEPDSLYGCGGKMLQPITRLRTEHEAMWGKALVT
YDLETAIPSSTRQAGII QALQNLGLCHILSVYLKGLDYENKDWCPLEELHYQA AWRNMQWDHCTSVSKE
VEGTSYHESLYNALQSLR DREFSTFYESLKYARVKEVEEMCKRSLESVSYLYPTLSRLQAIGELESIGEL
FSRSVTHRQLSEVYIKWQKHSQ LLDKSDFSFQEPIMALRTVILEILMEKEMDNSQRECIKDILTKHLVEL
SILARTFKNTQLPERAIFQ IKQYNSVSCGVSEWQLEEAQVFWAKKEQSLALSILKQMIKKLDASCAANNP
SLKLTYTECLRVCGNWL AETCLENPAVIMQTYLEKAVEVAGNYDGESSDEL RNGMKKAFLSLARFSDTQY
QRIENYKMSSEFENKQALL KRAKKEEVGLLREHKIQTNRYTVKVQRELELDELAL RALKEDRKRFLCKAVE
NYINCLLSGEEHDMWVFR LCSLWLENSGVSEVNGMMKRDGMKIPTYKFLPLMYQLAARMGTKMMGGLGFH
EVLNLLISRISMDHPHHTL FIIILALANANRDEFLTKPEVARRSRITKNVPKQSSQLDEDRTAANRIICT
IRSRRPQMVRVSEALCDAY IILANLDATQWKTQRKGINIPADQPITKLNLEDVVPTMEIKVDHTGEYG
NLVTIQSFKAEFRLAGGVNLPKI IDCVSDGKERRQLVKGRDDL RQDAVMQQVQMCNTLLQRNTE TRKR
KLTICTYKVVPLSQRSGVLEWCTGTVPIGEFLVNNEDGAHKRYRPNDFAFQCQKMMEVQKKSFEKYE
VFMDVCQNFQPVFRYFCMEKFLDPAIWFEKRLAYTRSVATSSIVGYILGLGDRHVQNILINEQSAELVHI
DLGVAFEQ GKILPTPETVPFRLTRDIVDGMGITGVEGVFRRCEKTMV MRNSQETLLTIVEVLLYDPLF
DWTMNP LKALYLQORPEDETELHPTLNADDQECKRNLSDIDQSFNKVAERVLMRLQEKLKGVEEGTVLSV
GGQVNL LIQQAIDPKNLSRL FPGWKAW

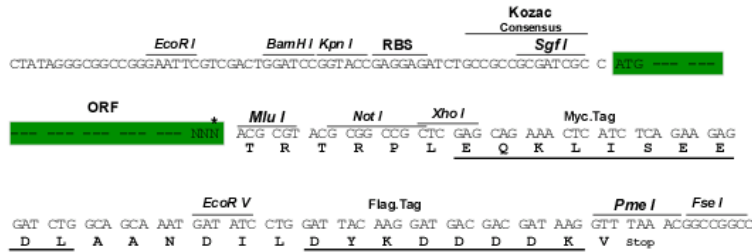
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

- ACCN:** NM_138292
- 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_138292.3](#), [NP_612149.1](#)

RefSeq Size: 8977 bp

RefSeq ORF: 5126 bp

Locus ID: 472

Cytogenetics: 11q22.3

Domains: PI3_PI4_kinase, FAT, FATC

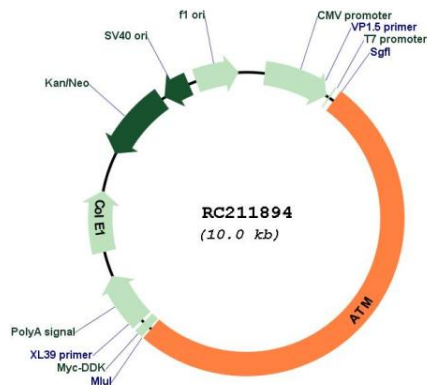
Protein Families: Druggable Genome, Protein Kinase, Transcription Factors

Protein Pathways: Apoptosis, Cell cycle, p53 signaling pathway

MW: 195.8 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 RC211894