

Product datasheet for **MG226850**

Atm (NM_007499) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Atm (NM_007499) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Atm
Synonyms: AI256621; C030026E19Rik
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG226850 representing NM_007499
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGTCTAGCACTCAATGATCTGCTCATTTGCTGCCGGCAGTTAGAGCATGACAGAGCTACAGAAAGAA
GGAAAGAAGTGGATAAAATTAAGCGCTGATTCAGGATCCTGAAACAGTTCAACATTTAGATAGGCATTC
TGATCCAAACAAGGAAAATATCTGAATTGGGATGCTGTTTTTCAGGTTTTACAGAAGTACATTCAAAA
GAAATGGAAAGTCTGAGAACAGCAAAATCAAATGTATCAGCCACCACACAGAGCTCCAGACAGAAGAAG
TGCAAGAGATCAGCAGTTTGGTCAGATACTTCATCAAATGTGCAAAACAAAAGAGCACCCAGGCTAAAATG
TCAAGACCTCTTGAATTATGTCATGGATACAGTAAAGACTCATCTAATGGTCTAACGTATGGAGCTGAC
TGTAGCAACATACTACTCAAAGACATTCCTTCTGTGAGAAAATACTGGTGTGAAGTATCTCAGCAACAGT
GGCTAGAATTGTTTTCACTGTACTTCAGGCTGTATCTCAAGCCATCACAGGACATTAATAGAGTTTTAGT
GGCTAGAATAATTCATGCTGTCACCAGAGGATGCTGTTCCAGACTGATGGATTACCTTCAAAGTTTTTA
GATCTTTTTTCCAAGGCTATTCAGTATGCCAGACAAGAAAAGAGCTCTCCTGGCTTAAGTCACATCTTAG
CAGCCCTAACATTTTCTCAAGTCTCTGGCTGTCAACTCCGAAAACGGGTGTGTGAAGCAGGAGATGA
AATTCCTCCTACCTTACTATATATTTGGACTCAACATAGACTTAATGATTCCTTAAAAGAAGTAATTATT
GAACTAATCAACTGCAGATTTATCCATCATCCACAAGGAGCCAGAGCTCCTGAAGAAGTGCTTATG
AATCCATGAAATGAAAAGTATCTTGTACAACCTATATGACTTGCTAGTGAATGAGATAAGTCATATAGG
AAGCCGAGGAAAATATTCTCAGGATCTCGTAATATTGCTGTCAAGGAAAATCTGATTGACCTGATGGCA
GATATCTGTTACCAGCTTTTTGATGCGATACCAGATCCGTGGAGATTTCTCAATCTTATGTGACACAAA
GGGAATCCACTGATTACAGTGTACCTTGCAAAAGAAGGAAAATAGACGTAGGCTGGGAAGTGATAAAGA
TTATCTTCAGAAGTCACAGAGTGATTTTGTATCTCGTGCCTTGGCTACAGATTACAACCCGATTAATATCA
AAATATCCTTCCAGTTTACCTAACTGTGAGCTGTCTCCATTAATACTGATACTGTACCAGCTTCTGCCTC
AACAGCGACGTGGAGAACGCATCCCATATGTGTTACGATGCCTTAAGGAAGTTGCCTTATGTCAAGGCAA
GAAATCAAACCTGAAAAGCTCTCAGAAGTCAGATTTATTGAAACTATGGATCAAAATTTGGTCTATTACC



TTTCGTGGTATAAGTTCTGGACAAACACAACTGAAAACCTTTGGTTTACTTGAGGCCATCATTCAAGGTA
 GTTTAGTTGAACTTGACAGAGAATTCTGGAAGTTATTTACTGGCTCAGCCTGTAACCTTCTAGTCCCTC
 AGTATGCTGCTTGACTTTGGCACTTAGCATCTGTGTAGTTCAGATGCAATAAAAATGGGAACAGAACAA
 AGTGTGTGTGAAGCAAATAGAAGTTTTCTGTAAGGAGTCAATAATGAGGTGGCTCTTATTCTACCAGT
 TAGAGGATGACTTAGAAGACAGCACAGAGCTGCCTCCAATTCTTCAGAGTAATTTTCTCATCTGTAGT
 CGAAAAAATCTGTAACTCTCACTATGAAAACTCAAAGCTGCAATGAAGTTTTTCAAAGGTGCCA
 GAATGTGAACAACACTGCGAAGATAAAGAAGAGCCTTCATTTTCAGAAGTAGAAGAACTGTTTCTCAGA
 CTACTTTTGACAAGATGGATTTTTAACTACTGTCAAAGAGTATGCTGTAGAAAAATTTCCAGTCTAGTGT
 TGGCTTCTGTCCAGCAAAATCTCAAGGAATCATTGGATCACTATCTTCTGGGATTATCAGAACAGCTT
 TTAAGTAATTACTCTTCTGAGATTACAAGTTCTGAAACCCTTGCCGGTGTCAAGTCTTTTGGTGGGTG
 TTCTTGGCTGCTATTGTTACATGGGTATAATACTGAAGACGAAGCCATAAATCAGAATTATCCAGAA
 AGCCAAGTCTCTGATGCAATGTGCAGGAGAAAGTATCTCTCTGTTAAAAATAAAACAAATGAGGAATCA
 AGAATTGGTTCATTGAGAAATGTGATGCATCTGTGTACAAGTTGCTTGTGTATACATACCAAGCATAACGC
 CAAACAAGATTGCCTCTGGCTTTTTCTACGATTATTAACATCAAAGCTTATGAATGACATTGCAGATAT
 TTGTAAGTTTACATCTGTACGAAAAAGCCATTGGATCACGGAGTACATCCAGGGGAAGATGATGAA
 GATGGTGGTGGTTGTGACAGTCTGATGGAGGCAGAGGGTCCATCGTCCACTGGTCTTTCTACTGCTTACC
 CCGCTAGTTCTGTGAGCGATGCAATGATTATGGAGAGAACCAGAATGCTGTTGGTGCCATGAGTCCCTT
 AGCTGCCGACTACCTGTCCAAACAAGATCATCTTCTTTAGACATGCTCAGGTTCTTAGGCCGATCTGTA
 ACTGCATCTCAGAGCCATACTGTGTCGTTTAGAGGAGCTGACATTAGAAGAAAAATGTTACTGTTGCTTG
 ATTCTAGCATACTCGATCTCATGAAGCCCTCCACCTGCATATGTAAGTGTCTCTGAAGGATCTCCC
 TGGAAACGAGCACTCATTGCCAATGGAAGATGTTGTTGAACTTCTGCAACCATTATCCCTTGTGTGTTCT
 CTGCACCGACGTGACCAAGATGTCTGTAACAGATTCTAAGCAATGTCTTCATATAGTGACAAACCTAG
 GCGAGGGCAGTGTGGACATGGAGAGCACAGGATTGCTCAAGGACACTTCTGACAGTGTGGGACGATT
 TTGGCATTGACAAGGAAAAGAAATGTGATTCTCTGTAAAGATGGCATTAGTAAAGTGTCTTCAAAACA
 TTGCTTGAAGCTGATCCATATTCCGAATGGCAATTCTTAATGTAAGGACAAGACTTTCTGTAATG
 AAGCTTTTTACAAATTTCTGTGACGATCATCATCAAGTTCCGATGTTGGCTGCAGGGTCACTCAACAG
 ATTATTTCCAGGATATGAGACAAGGCGATTTCTCCAGAAGCTTGAAGCACTCCCTCTGAAGTTTCCAGCAG
 ACATCTTTTAAACAATGCATACACGACAGCAGAGGCGGGGATCAGAGGACTGTTATGTGATTCTCAGAACC
 CTGATCTGCTGGATGAGATCTATAACAGAAAATCTGTAAGTACTGATGATGATAGCTGTGGTCTTGCAGT
 TAGCCAGTCTGTGAAAAGCAGGCTTTGTTTGGCTTATGCAAGTCTGTGAAGGAAAACAGACTAGAACCT
 CATCTTGTGAAAAGGTTTTAGAGAAAGTCTCCGAATCGTTTGGATGTAGAAGTTTGAAGACTTATGA
 TTTCTCACCTAGACTACCTGGTTTTGGAATGGCTGAACCTTCAAGATACTGAATATAGCTTATCTCTTT
 TCCTTTTATGTTATTAATAACTACACAAGCATTGAGGATTTCTATCGGTCTTGTACAAGATTTTGATCCCA
 CATTGTTGTAATCAGAAGCCATTTTATGATGAGGTGAAGTCCATTGCTAATCAGATTCAAAGTGTGGAAAA
 GCCTGTTGGTAGATTGCTTTCCGAAGATTTCTGTGCACATCCTTCTTACTTTGCCTACGAGGGCAGCAG
 AGACAGCTACGTGTCACAGAAAAGAGAGACTGCTACCAAGGTCTACGATACTCTTAAAGGGGAAGACTTC
 CTAGGAAAACAGATTGACCAAGTATTATTAGTAATTTGCCAGAGATTGTGGTGGAGTTGCTGATGACAT
 TGCATGAGACAGCTGACTCGGCTGACTCGGACGCCAGTCAAAGCGCCACCGCCTTGTGTGATTTTTCAGG
 GGATTTGGATCCTGCCCCCAACCGCCATATTTCCCTCACATGTCATTACAGCAACGTTTGTCTTACATC
 AGCAACTGTCAAAAACCAAGTTTAAAAGCATTCTAGAAATTTCTTCTAAAATCCCGATTCCCTATCAGA
 AAATACTTCTGGCCATTTGTGAACAAGCAGCTGAGACAAATAATGTCTTTAAAAAGCACAGAATTCTTAA
 AATATATCACCTGTTTGTAGTTTATTACTGAAAGATATACAGAGTGGCCTGGGAGGGGCTTGGGCCTTT
 GTCCTTCGCGATGTTATTTATACTCTGATTCACTACATCAACAAAAGGTCTTCTCATTTACAGATGTGT
 CGTTGCGTAGCTTTTCCCTTGTGTGACCTATTAAGTCGAGTTTGTACACAGCTGTAACCTCAATGTAA
 GGATGCTCTAGAAAGCCATCTTACGTTATCGTTGGCACACTTATCCCTTGTGGATTATCAGGAAGTT
 CAAGAACAGGTATTGGACCTGTTGAAGTACTTAGTGATAGATAACAAAGACAATAAAAACCTCTCTGTCA
 CAATTAAGCTTTTGGATCCCTTCTGACCATGTTATTTTAAAGGACTTGGCTTACTCAACAGAAAAT
 CAAATATAGTGGAGGACCTTTTTCACTCTAGAGGAAATAAACCATTTTTCTCTCAGTAAGTGCTTACAAT
 CCACTTCCGCTGACCAGGCTTGAAGGACTGAAGGATCTTCAAGACAACCTGGAGCAACATAAAGATCAGA
 TGCTAGATCTTCTGAGAGCGTCTCAAGATAACCCACAAGATGGCATTGTGGTGAAGCTAGTTGTACAGCTT
 GTTGCAGTTATCCAAGATGGCAGTGAACAGACTGGTGAAGGAGAAGTTTTAGAGGCTGTCCGAAGGTGT
 TTGGGAGAAAATAGGTCTCTGGATTTCTCCACCATAGCTGTCCAGCATAACAAAGATGTGTCCTATACCA

AAGCCTACGGGTTACCTGAAGACAGAGAACTTCAGTGGACCTTGATAATGCTGACTGCCCTCAACAATAC
CCTGGTAGAGGACAGTGTCAAAATTCGATCTGCTGCTACCTGTTTAAAAACATTTTGGCTACAAAAG
ATTGGACATATTTTCTGGGAGAATTATAAGACATCAGCGGATCCAATGCTGACCTATCTACAACCTTTTA
GAACATCGAGGAAAAAGTTTTAGAAAGTCCCCGATCTGTTAAAGAAGATGTTTTAGAAGGCTGGATGC
TGTGAATCTGTGGGTTCCCTCAAAGTAAAGTCAAGACATTTGGATAAAGACACTGACGTGTGCCTTTCTG
GACAGTGGAGGCATAAACAGTGAATTCCTCAGTTATTAAGCCAATGTGTGAAGTAAAAACCGACTTCT
GCTAGTGTGCTGCCATACTTGATCCATGATGTTTTACTGCAAGATACACATGAATCGTGAGAACTCT
GCTGTCTGCGCACGTCCGAGGATTTTTCACTAGTTGTTTTAAGCATTCTCCCAAGCAAGCCGCTCAGCA
ACTCTGCAAAATTCGATTTCAGAGTCAGAGAACTTTCTCCGATGCTGTTTGGATAAAAAAGTCACAAAGAA
CCATGCTTGTGTTGTCGACTATCTGAGAAGGCAAAAAGAGACCTTCTCGGGAACAGCTTTTGTGACGC
TTTCTGGCTGGATTTGAATTATCTTGAGGTTGCGAAGGTGGCTCAGTCTGCTGCTCACTTACAGGCC
TTGCTCTACGCAGAGATCTATTCAGATAAGAAAAGCACAGACGAGCAAGAGAAAAGTCCAACATTTG
AAGAAGGAAGTCAAGGAACAATTTTCTAGTTTGAAGTAAAAAGTAAAGAAGAACTGGAATAAGCTT
ACAGGATCTTCTTAGAGATCTACAGAAGTATAGGAGAGCCGGACAGCCTGTATGGCTGTGGAGGAGGG
AAAATGTTACAACCCCTTACTAGAATACGGACATATGAACATGAAGCTACGTGGGAGAAAGCCTTAGTAA
CTTACGACCTGGAGACCAGCATCTCTCCTCCACCCGCCAGTCAGGAATCATCCAGGCCCTGCAGAAATTT
GGGGCTCTCCCATATCCTGTCTGTCTATCTGAAAGGATTAGACTATGAAAGACGAGAGTGGTGCCTGAG
CTGCAGGAGCTGCGTTACCAGGCGGCGTGGAGGAACATGCAGTGGGGCCTCTGCGCTTCTGCCGGCAAG
AAGTAGAAGGAACCAGTTACCATGAATCGTTGTATAATGCTCTGCAGTGTCTAAGAAACAGAGAATTTCTC
CACATTTTATGAAAGTCTCCGATATGCCAGTCTTTTTCAGGGTAAAGAAGTTGAAGAGTTGAGTAAGGGC
AGCCTTGAGTCTGTATATTCGCTGTATCCACACTTAGTAGATTGCAGGCAATTGGAGAAGTGGAAAACA
GTGGCGAGCTTTTCTCAAGGTCAGTCACAGACAGAGAGCGCTCTGAAGCATACTGGAAGTGGCAGAAGCA
CTCCCAGCTTCTGAAAGACAGCAGCTTTCAGCTTTCAGGAGCCTCTCATGGCTCTGCGCACACTTCTTG
GAGACCTTGGTACAGAAGGAAATGGAGCGCTCTCAAGGAGCATGCTCTAAGGACATTTCTACCAAAACACC
TCGTTGAATTTCTGTTCTGGCTCGAACCTTCAAGAACACACAGCTCCCTGAAAGAGCAATATTTCAAAAT
TAAGCAATATAATTCAGCTATTTGTGGAATTTCTGAGTGGCATTGGAAGAAGCACAAGTATTCTGGGCA
AAAAAGGAGCAGAGTCTTGTCTGAGTATTCTCAAGCAGATGATCAAGAAGTTGGACTCCAGCTTTAAAG
ATAAAGAGAATGATGCAGGTCTCAAAGTCATATACGCAGAGTGTCTGAGGGTTTGTGGCAGCTGGCTGGC
AGAAACTTGCTTAGAAAACCTGCAGTCATCATGCAGACCTATCTAGAAAAGGCGGTGAAGGTTGCTGGA
AGTTACGATGGCAACAGCAGAGAGCTCAGAAATGGACAGATGAAGGCCTTTCTCTCGTTGGCAAGGTTCT
CTGATACTCAGTACCAGAGAATGAAAACATCATGAAGTCAAGTATGAAATTTGAAAACAAGCAAACCTCTT
AAAAAGAGCCAAAGAGGAAGTGGGCCTTCTAAGGGAACATAAAATTCAGACCAACAGATACACAGTAAAG
GTTACAGGAGAAGTGGAGCTGGACGAATGTGCTCTCCGTGCAGTGCAGAGAGGATCGCAAGCGCTTCTGT
GTAAGAGCAGTGGAGAAGTACATCAACTGCTTACTAAGCGGGGAAGAACATGATCTGTGGGTGTTCCGGCT
TTGCTCCCTCTGGCTTGAATTTCTGGAGTTTCTGAAGTCAATGGCATGATGAAGAAAGTGAATGAAG
ATTTATCCTATAAGTTTTTGCCTCTCATGTATCAATGGCTGCTCGAATGGGGACCAAAATGACGGGAG
GCCTAGGATTTACGAAGTCCCTCAATAATCTAATCTCTAGGATTTCACTGGATCACCCCCATCACTTT
GTTCAATATACTGGCCTTAGCAAATGCGAACAAGATGAATTTTTGAGCAAACAGAGACAACAAGAAGG
AGTCGAATAACCAAAAAGTACATCTAAGAAAACCTCACCTTGTGAGGATCGAACAGAGGCTGCAACCA
GAATCATCCACTCCATCAGAAGTAAGCGATGTAAGATGGTGAAGGACATGGAGGCGCTCTGCGATGCCA
CATCATCTTGGCAACATGGACGCTCTCAGTGGAGGGCTCAGAGAAAAGGCATCAATATTCAGGCAAC
CAGCCAATCACTAAACTGAAGAATTTAGAAGATGTTGTTGTTCCCACTATGGAATTAAGGTTGATCCCA
CAGGAGAGTATGAAAATCTGGTACTATAAAATCATTTAAAACAGAAATTCGCTTAGCTGGAGGCTTAAA
TTTACCAAAAATAATAGATTGTGTGGGTTCTGATGGCAAGGAAAGGAGACAGCTTGTGAAGGGCCGTGAT
GACCTGAGGCAAGATGCTGTATGCAGCAGGTCTTCCAGATGTGCAATACACTACTGCAGAGAAACTG
AGACTAGAAAGAGGAAACTGACTATCTGCACATACAAGGTGGTCCCTTTCTCAGCGAAGCGGTGTTCT
CGAGTGGTGCACAGGAACCGTTCCTATTGGTGAATATCTTGTAAACAGCGAAGACGGTGCACATAGAAGA
TACAGGCCAAATGATTTCAAGTCCCAATCAGTGCCAAAAGAAAATGATGGAAGTGCAGAAGAAGTCTTTG
AAGAGAAATATGATACCTTCATGACGATTTGCCAAAACCTTGAACCAGTTTTCCGTTACTTCTGCATGGA
AAAATTTCTGGACCCAGCTGTTTGGTTTGAAGAACGATTGGCATATACACGCAGTGTGGCCACATCTTCT
ATCGTCCGTTACATCCTTGGACTTGGCGACAGGCACGTACAGAATATCTTGATAAACGAGCAGTCGGCAG
AGCTTGTGCATAGACCTGGGAGTGGCTTTTGAACAGGGGAAGATCCTTCCCACTCCAGAAACAGTTCC

```
TTTTAGACTCAGCAGAGATATTGTGGACGGGATGGGCATCACCGGTGTGGAAGGTGTCTTCAGAAGGTGC  
TGTGAAAAACGATGGAAGTTATGCGGAGTTCTCAGGAAACCCTGCTGACCATTGTAGAGGTTCTTTTGT  
ACGATCCACTCTTTGATTGGACTATGAATCCTTTAAAAGCTCTGTATCTACAGCAGAGACCAGAAGATGA  
GTCCGACCTCCATTCCACCCCAATGCAGATGATCAAGAATGCAAACAAAGTCTTAGTGATACTGACCAG  
AGTTTCAACAAAGTAGCTGAGCGTGTCTTGATGAGACTGCAAGAGAACTGAAAGCGTGGAGGAAGGCA  
CTGTGCTCAGTGTGGGTGGACAGGTGAACTTGCTTATCCAGCAGGCCATGGATCCCAAAAATCTCAGCCG  
ACTCTTCCAGGATGAAAGCTTGGGTG
```

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG226850 representing NM_007499
 Red=Cloning site Green=Tags(s)

```

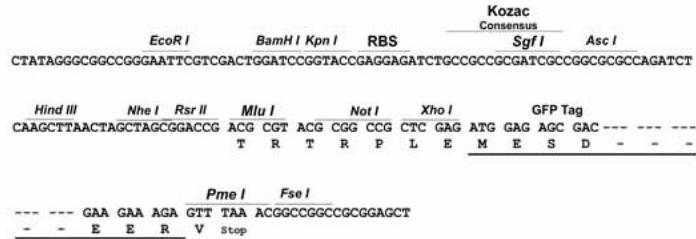
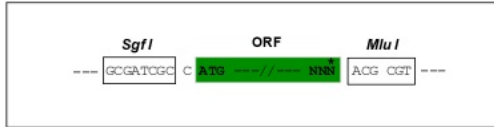
MSLALNDLLICCRQLEHDRATERRKEVDKFKRLIQDPETVQHLDHRHSDSKQGKYLNWDVAVFRFLQKYIQK
EMESLRTAKSNVSATTQSSRQKKMQEISSLVRYFIKANKRAPRLKCQDLLNYVMDTVKDDSSNGLTYGAD
CSNILLKDILSVRKYWCEVSQQQWLELFSLYFRLYLKPSQDINRVLVARIHAVTRGCCSQTDGLPSKFL
DLFSKAIQYARQEKSSPGLSHILAAALNIFLKSLAVNFRKRVCAGEDEILPTLLYIWTQHRLNDSLKEVII
ELIQLQIYIHHHPQGARAPEEGAYESMKWKSILYNLYDILLVNEISHIGSRGKYSSGSRNIAVKENLIDLMA
DICYQLFDADTRSVETISQSYVTQRESTDYVPCRRKIDVGVGVEIKDYLQKSQSDFDLVPWLQITTRLIS
KYPSSLPNCELSPLILILYQLLPQRRGERIPYVLRCLKEVALCQGKSNLESSQKSDLLKLWIKIWSIT
FRGISSGQTQTFENFGLLEAIIQGSVELDREFWKLFTGSACKPSSPSVCCLTALSIQVVPDAIKMGTEQ
SVCEANRFSVSKESIMRWLLFYQLEDDLEDSTELPPIQLSNFPHLVVEKILVSLTMKNSKAAMKFFQVSP
ECEQHCEDEKEEPSFSEVEELFLQTTDFKMDFLTIVKEYAVEKQSSVGFVSVQNLKESLDHYLLGLSEQL
LSNYSSEITSETLVRCSLLVGVLCYCYMGIITEDEAHKSELFQKAKSLMQCAGESISLFKNKNTNEES
RIGSLRNVMHLCTSCLCIHTKHTPNKIASGFFLRLLTSKLMNDIADICKSLASCTKKPLDHGVHPGEDDE
DGGGCDLSLMEAGPSSGLSTAYPASSVSDANDYGENQNAVGAASPLAADYLSKQDHLMLDMLRFLGRSV
TASQSHVTSFRGADIRRRLLLLLDSSILDLMKPLHLHMYLVLLKDLPGNEHSLPMEDVVELLQPLSLVCS
LHRRDQDVCKTILSNVLHIVTNLQGSVDMESTRIAQGHFLVMGAFWHLTKEKCVFSVRMALVKLQQT
LLEADPYSEWAILNVKGGQDFPVNEAFSFLADDHQQVRMLAAGSVNRLFQDMRQGDVSRSLKALPLKFQQ
TSFNNAYTAEAGIRGLLSDSQNPDLLEIYNRKSULLMMIAVVLHCPVCEKQALFALCKSVKENRLEP
HLVKKVLEKVSSEFGCRSLEDFMISHLDYLVLEWNLQDTEYSSFPFLLNYTSIEDFYRSCYKILIP
HLVIRSHFDEVKSIAHQKQKWSLLVDCFPKILVHILPYFAYEGTRDSYVSQKRETATKYVDTLKGGDF
LQKQIDQVFIISNPEIVVELLMTLHETADSADSDASQATLDFSGDLDPAPNPPYFVSHVQATFAYI
SNCHKTKFKSILEILSKIPDSYQKILLATICEQAETNNVFKKHRILKIYHLFVSLLLKDIQSGLGGAWAF
VLRDVIYTLIHYINKRSSHFTDVSLSRSLCCDLLSRVCHTAVTQCKDALESHLHVIVGTILPLVDYQEV
QEQLVLDLLKYLVIDNKDNKLSVTIKLLDPFDHVIKDLRLTQQKIKYSGGPFSLLEEINFLSVSAYN
PLPLTRLEGLKDLRRQLEQHKDQMLDRLASQDNPDGIVVKLVSLLQLSKMAVNQTGEREVLEAVGRC
LGEIGPLDFSTIAVQHNKDVSYTKAYGLPEDRELQWTLIMLTALNNTLVDSVKIRSAATCLKNILATK
IGHIFWENYKTSADPMLTYLQPFRTSRKKFLEVPRSVKEDVLEGLDAVNLWVPQSESHDIWIKTLTCAFL
DSGGINSEILQLLKPMCEVKTDFCQMLLPYLIDHVLQDTHESWRTLTAHVGRGFTSCFKHSSQASRSA
TPANSDESSENFLRCCLDKKSQRTMLAVVDYLRQKRPSSGTAFFDDAFWLDLNYLEVAKVAQSCSAHFTA
LLYAEIYSDKKSTDEQEKRSPTFEESGQTTISSLSEKSKEETGISLQDLLLLIYRSIGEPDLSYGCSSG
KMLQPLTRIRTYEHEATWEKALVTYDLETSSSSSTRQSGIIQALQNLGLSHILSVYLKGLDYERREWCAE
LQELRYQAARNMQWGLCASAGQEVGTSYHESLYNALQCLRNREFSTFYESLRYASLFRVKEVEELSKG
SLESVSYLYPTLSRLQAIGELENGELFSRSVTDRESEAYWKWQKHSQLLKDSDFSFQEPLMALRTVIL
ETLVQKEMERSQGACSKDILTKHLVEFVSLARTFKNTQLPERAIFKIKQYNSAICGISEWHLEEAQVFWA
KKEQSLALSILKQMIKKLDSSFKDKENDAGLKVIYAELRVCGSWLAETCLENPAVIMQTYLEKAVKVG
SYDGNRELRNGQMKAFLSLARFSDTQYQRIENYMKSSFEFNKQTLKRAKEEVGLLREHKIQTNRYTVK
VQRELELDECALRALREDRKRFLCKAVENYINCLLSGEEHDLWVFRCLSLWLENSGVSEVNGMMKKDGMK
ISSYKFLPLMYQLAARMGTMGTGGLGFHEVLNLLISRIISLDHPHHTLFIILALANANKDEFLLSKPETTRR
SRITKSTSKENSHLDEDRTAATRIIHSIRSKRCKMVKDMEALCDAYIILANMDASQWRAQRKGINIPAN
QPITKLNLEDVVPTMEIKVDPTGEYENLVTIKSFKTEFRLAGGLNLPKIIDCVGSDGKERRQLVKGRD
DLRQDAVMQVQMCNTLLQRNTETRKRKLTICTYKVVPLSQRSGVLEWCTGTVPIGEYL VNSGDGAHRR
YRPNDFSANQCQKMMMEVQKKSFEKYDTFMTICQNFEPVFRYFCMEKFLDPAVWFEKRLAYTRSVATSS
IVGYILGLGDRHVQNILINEQSAELVHIDLGVAFEQGKILPTPETVFPRLSRDIVDGMGITGVEGVFRRC
CEKTMEVMRSSQETLLTIVEVLLYDPLFDWTMNPALKALYLQORPEDESLLHSTPNADDQECKQSLSDTDQ
SFKVAERVLMLRQEKLVGVEEGTVL SVGGQVNLIIQAMDPKNLSRLFPGWKAWV
  
```

TRTRPLE - GFP Tag - V

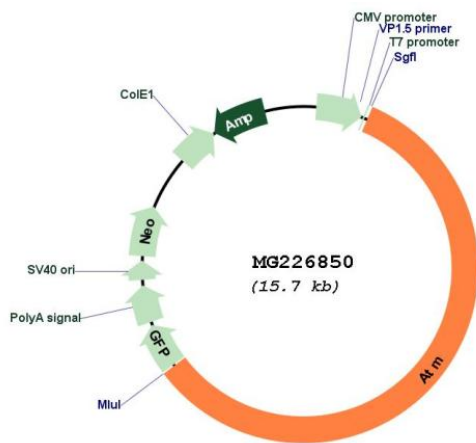
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_007499
 ORF Size: 9198 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 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_007499.2](#), [NP_031525.2](#)

RefSeq Size: 11964 bp

RefSeq ORF: 9192 bp

Locus ID: 11920

UniProt ID: [Q62388](#)

Cytogenetics: 9 29.12 cM

Gene Summary:

Serine/threonine protein kinase which activates checkpoint signaling upon double strand breaks (DSBs), apoptosis and genotoxic stresses such as ionizing ultraviolet A light (UVA), thereby acting as a DNA damage sensor. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX at double strand breaks (DSBs), thereby regulating DNA damage response mechanism. Also plays a role in pre-B cell allelic exclusion, a process leading to expression of a single immunoglobulin heavy chain allele to enforce clonality and monospecific recognition by the B-cell antigen receptor (BCR) expressed on individual B-lymphocytes. After the introduction of DNA breaks by the RAG complex on one immunoglobulin allele, acts by mediating a repositioning of the second allele to pericentromeric heterochromatin, preventing accessibility to the RAG complex and recombination of the second allele. Also involved in signal transduction and cell cycle control. May function as a tumor suppressor. Necessary for activation of ABL1 and SAPK. Phosphorylates DYRK2, CHEK2, p53/TP53, FANCD2, NFKBIA, BRCA1, CTIP, nibrin (NBN), TERF1, RAD9, UBQLN4 and DCLRE1C. May play a role in vesicle and/or protein transport. Could play a role in T-cell development, gonad and neurological function. Binds DNA ends. Plays a role in replication-dependent histone mRNA degradation. Phosphorylation of DYRK2 in nucleus in response to genotoxic stress prevents its MDM2-mediated ubiquitination and subsequent proteasome degradation. Phosphorylates ATF2 which stimulates its function in DNA damage response.[UniProtKB/Swiss-Prot Function]