

## Product datasheet for **MR206707**

### **Atat1 (NM\_001142744) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Atat1 (NM_001142744) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Atat1
Synonyms:	0610011P08Rik; 2610008K08Rik; 2610110G12Rik; 3110080J08Rik; Mec17; TAT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR206707 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGAGTTCCTCGATGTGGATGCGCTGTTCCCGAGCGGATCACCGTCTGGACCAGCACCTGCGGC  
 CTCGGCCCGCCGACCCGGAACCAACGCCGGCCGTGTGGATCTGCAGCAGCAAATCATGACTATTGT  
 AGATGAGCTGGGCAAGGCTTCTGCCAAGGCGCAGCACCTCCCTGCACCCATCACCAGCGCTTTGAGGATG  
 CAAAGCAACCGGCACGTTATTTACATACTGAAGGACACCTCAGCCCGACCGGCAGGGAAAGGAGCCATTA  
 TTGGTTTCTCAAAGTTGGATACAAGAAGCTCTTTGACTGGATGACCGGGAGGCTCACAATGAGGTAGA  
 ACCCTTTGCATTCTGGACTTTTACATCCACGAGTCGGTGCAACGGCATGGCCACGGGCGAGAACTTTTT  
 CAGCATATGTTACAGAAAGAGCGAGTGGAGCCCCACCAACTGGCCATTGACCGACCATCGCCGAAGCTGC  
 TCAAGTTCCTGAATAAGCACTACAACCTGGAGACCACAGTCCCACAGGTGAACAACCTTTGCATCTTTGA  
 AGGCTTCTTTGCCATCAGCACCAGCCCGCCACTTCTCTCTGAGAGCAACTCGACTCTCGTGTCTGT  
 GTGGCCGATCCCATACCTGCTGCTCCAGCACGGAAGCTGCCACCAAAAAGAGCAGAGGGAGACATTAAGC  
 CATACTCTTCCAGTGACAGAGAATTCCTGAAGGTAGCTGTGGAGCCTCCTTGCCCTGAACAGGGCCCC  
 TCGGCGTGCCACCTCCAGCCACCCACTCCACGTTCTAGCAGCCTGGGCAACTACCGGATCGGGGT  
 CCCCTTCGGCCCTTTGTTCCAGAGCAGGAGCTGCTTCGCTCCCTGCGTCTCTGTCCCCACACCCTACTG  
 CACGCCTTCTGTGGCCACTGACCCTGGAGGCAGCCAGCCAGCGCAGACGCACCAGGGGGACTCCCTG  
 GGGGCTGGTAGCCAAAGCTGCCACTACAGCCGCATGGGGATTCAATACCTCATTCTGGGTACAGGC  
 AACCAAGAACGGAAGCAGGGGGAACAGGAAGCGGAGGATAGGTCGGCCAGTGAGGATCGGGTCTTGTTAC  
 TGGATGGGTCTGGGGAGGAGCCTACACAGACAGGTGCTCCAAGGGCCAGGCGCCACCCCCAGTCTGTG  
 GACGGTGGGTGGGACATAATGAACGCCAGGGTCATTGAAACCTGCAGGAACGCCGACAGCACAGGCGCT  
 TGG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR206707 protein sequence  
 Red=Cloning site Green=Tags(s)

MEFPFDVDALFPERITVLDQHLRPPARRPGTTTPARVDLQQQIMTIVDELGKASAKAQHLPAPITSALRM  
 QSNRHVIYILKDT SARPAGKGA IIGFLKVGKLFVLD DREAHNEVEPLCILD FYIHESVQRHGHGREL F  
 QHMLQKERVEPHQLAIDRPSKLLKFLNKHYNLETTVPQVNNFVIFEGFFAHQHRPPTSSLRATRHSRAA  
 VADPIPAAPARKLPPKRAEGDIKPYSSDREFLKVAVEPPWPLNRAPRRATPPAHPPRSSLGNSPDRG  
 PLRPFVPEQELLRSLRLCPPHTARLLLATDPGGSPAQRRTTRGTPWGLVAQSCHYSRHGGFNTSFLGTG  
 NQERKQGEQEAEDRSASEDRVLLLLDGSGEPTQTGAPRAQAPPQSWTVGGDIMNARVIRNLQERRSTRP  
 W

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001142744

**ORF Size:** 1266 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\\_001142744.1](#), [NP\\_001136216.1](#)
**RefSeq Size:** 1463 bp

**RefSeq ORF:** 1266 bp

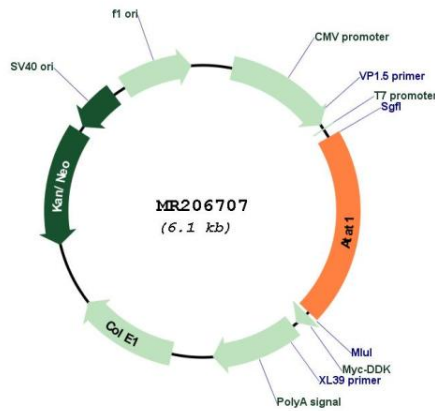
**Locus ID:** 73242

**UniProt ID:** [Q8K341](#)
**Cytogenetics:** 17 B1

**MW:** 47.2 kDa

**Gene Summary:** Specifically acetylates 'Lys-40' in alpha-tubulin on the luminal side of microtubules. Promotes microtubule destabilization and accelerates microtubule dynamics; this activity may be independent of acetylation activity. Acetylates alpha-tubulin with a slow enzymatic rate, due to a catalytic site that is not optimized for acetyl transfer. Enters the microtubule through each end and diffuses quickly throughout the lumen of microtubules. Acetylates only long/old microtubules because of its slow acetylation rate since it does not have time to act on dynamically unstable microtubules before the enzyme is released. Required for normal sperm flagellar function. Promotes directional cell locomotion and chemotaxis, through AP2A2-dependent acetylation of alpha-tubulin at clathrin-coated pits that are concentrated at the leading edge of migrating cells. May facilitate primary cilium assembly.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR206707