

Product datasheet for **RN205489**

Aanat (NM_012818) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Aanat (NM_012818) Rat Untagged Clone
Tag: Tag Free
Symbol: Aanat
Synonyms: AA-NAT; Nat4
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >RN205489 representing NM_012818
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTGAGCATCCACCCCTGAAACCTGAGGCCCTGCATCTGCCTCTTGGGACCTCAGAGTTCCTAGGCT
GCCAGCGGCCACACACTCCCTGCCAGTGAGTCCGCTGCCTCACGCCGAGGATGCCACCACTGCGTT
TGAGATTGAGCGGAAGCCTTTATCTCAGTCTCGGTACCTGCCCTCCACTTGGATGAGATCCGGCAC
TTCTCACCTGTGTCCAGAGCTGTCACTGGGCTGGTTCGAGGAGGGCTGTCTTGTGGCCTTCATCATCG
GTTCACTTTGGACAAGGAGAGACTTACTCAGGAGTCGCTGACACTACACAGGCCTGGAGCCGCACGGC
CCACCTGCACGTACTGGCCGTGCACCGAACCTCCGGCAGCAGGGCAAGGGCTCCGTCTGCTGTGGCGA
TACCTTACCACCTGGGAGTCAGCCGGCGGTGCGCCGGCTGTGCTCATGTGCGAGAACGCCCTGGTGC
CCTTCTATGAGAAATTTGGTTTCCAGGCCATGGGCCCGTGCATCACCATGGGATCTCTCACCTTCC
TGAGCTGCAATGTTCTTACGGTGCCACACCTTCTGAGGAGGAACAGTGGCTGC**TGA**

ACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_012818
Insert Size: 618 bp
OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).



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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:	<ol style="list-style-type: none">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:	<u>NM_012818.2</u> , <u>NP_036950.1</u>
RefSeq Size:	1311 bp
RefSeq ORF:	618 bp
Locus ID:	25120
UniProt ID:	<u>Q64666</u>
Cytogenetics:	10q32.2
Gene Summary:	The protein encoded by this gene belongs to the acetyltransferase superfamily. It is the penultimate enzyme in melatonin synthesis and controls the night/day rhythm in melatonin production in the vertebrate pineal gland. Melatonin is essential for the function of the circadian clock that influences activity and sleep. This enzyme is regulated by cAMP-dependent phosphorylation that promotes its interaction with 14-3-3 proteins and thus protects the enzyme against proteasomal degradation. This gene may contribute to numerous genetic diseases such as delayed sleep phase syndrome. [provided by RefSeq, Feb 2014]