

Product datasheet for RC221042

NAT1 (NM_000662) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NAT1 (NM_000662) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NAT1
Synonyms:	AAC1; MNAT; NAT-1; NATI
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC221042 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGGACATTGAAGCATATCTTGAAAGAATTGGCTATAAGAAGCTAGGAACAAATTGGACTTGAAACAT
 TAACTGACATTCTTCAACACCAGATCCGAGCTGTTCCCTTTGAGAACCTTAACATCCATTGTGGGGATGC
 CATGGACTTAGGCTTAGAGGCCATTTTGTCAAGTTGTGAGAAGAAATCGGGGTGGATGGTGTCTCCAG
 GTCAATCATCTTCTGTACTGGGCTCTGACCACTATTGGTTTTGAGACCACGATGTTGGGAGGGTATGTTT
 ACAGCACTCCAGCAAAAAATACAGCACTGGCATGATTACCTTCTCCTGCAGGTGACCATTGATGGCAG
 GAACTACATTGTCGATGCTGGGTTTGGACGCTCATACCAGATGTGGCAGCCTCTGGAGTTAATTTCTGGG
 AAGGATCAGCCTCAGGTGCCTTGTGTCTCCGTTTGACGGAAGAGAATGGATTCTGGTATCTAGACCAAA
 TCAGAAGGGAACAGTACATTCCAAATGAAGAATTTCTTCATTCTGATCTCCTAGAAGACAGCAAAATACCG
 AAAATCTACTCCTTTACTCTTAAGCCTCGAACAATTGAAGATTTGAGTCTATGAATACATACCTGCAG
 ACATCTCCATCATCTGTGTTTACTAGTAAATCATTTTGTTCCTTGACAGCCCGATGGGGTTCACTGTT
 TGGTGGGCTTCAACCTCACCCATAGGAGATTCAATTATAAGGACAATACAGATCTAATAGAGTTCAAGAC
 TCTGAGTGAGGAAGAAATAGAAAAAGTGCTGAAAAATATATTTAATATTTCCCTTGACAGAAAGCTTGTG
 CCCAAACATGGTGATAGATTTTTTACTATT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC221042 protein sequence
 Red=Cloning site Green=Tags(s)

MDIEAYLERIGYKSRNKLDLETLDILQHQIRAVPFENLNIHCGDAMDGLGLEAIFDQVVRNRGGWCLQ
 VNHLLYWALTTIGFETTMLGGYVYSTPAKKYSTGMIHLLQVTIDGRNYIVDAGFRSYQMWQPLELISG
 KDQPQVPCVFRLTEENGFWYLDQIRREQYIPNEEFLHSDLLDSKYRKIYSFTLKPRTIEDFESMNTYLQ
 TSPSSVFTSKSFCSLQTPDGVHCLVGFTLTHRRFNYKDNTDLIEFKTLSEEEIEKVLKNIFNISLQRKLV
 PKHGDRFFTI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6349_h11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000662

ORF Size: 870 bp

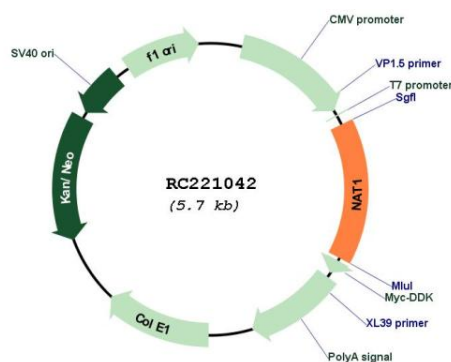
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

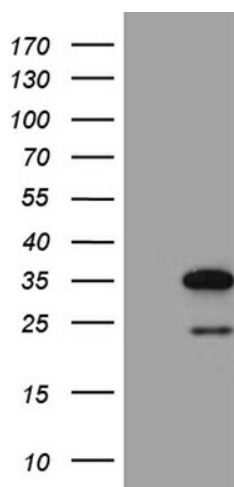
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<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_000662.8</u>
RefSeq Size:	1821 bp
RefSeq ORF:	873 bp
Locus ID:	9
UniProt ID:	<u>P18440</u>
Cytogenetics:	8p22
Domains:	Acetyltransf2
Protein Pathways:	Caffeine metabolism, Drug metabolism - other enzymes, Metabolic pathways
MW:	33.9 kDa
Gene Summary:	<p>This gene is one of two arylamine N-acetyltransferase (NAT) genes in the human genome, and is orthologous to the mouse and rat Nat2 genes. The enzyme encoded by this gene catalyzes the transfer of an acetyl group from acetyl-CoA to various arylamine and hydrazine substrates. This enzyme helps metabolize drugs and other xenobiotics, and functions in folate catabolism. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2011]</p>

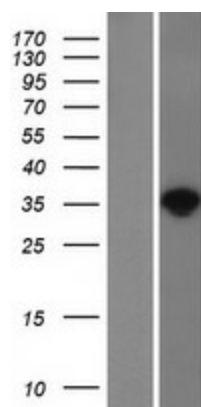
Product images:



Circular map for RC221042



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NAT1 (Cat# RC221042, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NAT1 (Cat# [TA810719])(1:2000). Positive lysates [LY424588] (100ug) and [LC424588] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424588]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221042 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).