

Product datasheet for **RR210891**

Nudt21 (NM_001039004) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Nudt21 (NM_001039004) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Nudt21
Synonyms: Cpsf5
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR210891 representing NM_001039004
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGTCTGTGGTCCGCCCAATCGCTCGCAGACGGGCTGGCCCCGGGGGTCAACCAATTCGGTAACAAGT
ACATCCAGCAAACCAAGCCCCTCACCTGGAGCGCACCATTAACCTGTACCCACTTACCAACTATACTTT
TGGTACAAAGGAGCCCCTCTATGAAAAGGACAGCTCTGTGGCGGCCAGATTTAGCGCATGCGGGAGGAA
TTTGATAAGATTGGGATGAGAAGGACTGTAGAAGGGTTCTGATCGTACACGAGCACCGCCTGCCACG
TGCTACTGCTACAGCTGGGAACAACCTTCTCAAACCTACCTGGCGGTGAACCTAACCCAGGAGAAGATGA
AGTTGAAGGACTAAAACGCTTAATGACAGAGATACTGGGTCGTCGAAGATGGAGTCCCTGCAAGACTGGGTC
ATCGATGACTGCATTGGGAACCTGGTGGAGACCAATTTTGAACCTCCTCAGTACCCGTATATTCCTGCAC
ATATAACAAAGCCCAAGGAACATAAGAAGTTGTTTCTGGTTCAGCTTCAAGAGAAAGCCTTGTTTGGCGT
CCCTAAGAATTACAAGCTGGTAGCTGCACCGTTGTTTGAACCTGTACGACAATGCTCCGGGATACGGACCC
ATCATTCTAGTCTTCTCAGCTGCTGAGCAGGTTAATTTTATATAACAAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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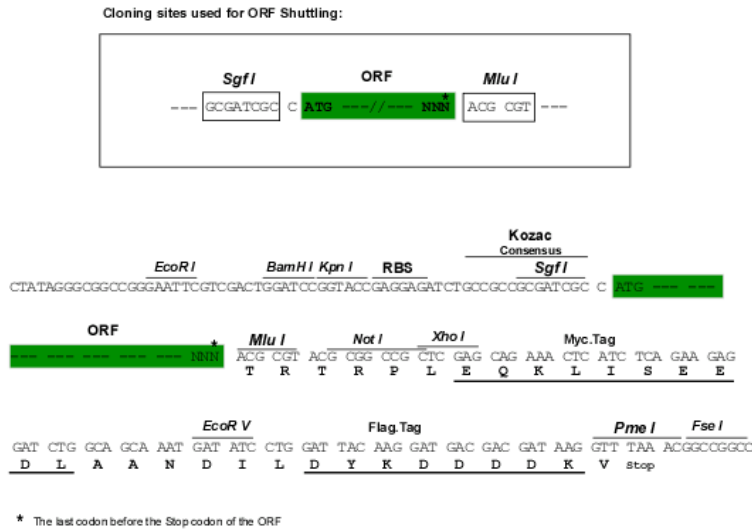
Protein Sequence: >RR210891 representing NM_001039004
Red=Cloning site Green=Tags(s)

MSVVPNRSQTGWPRGVNQFGNKYIQQTKPLTLERTINLYPLTNYTFGTKEPLYEKDSSVAARFQRMREE
 FDKIGMRRTVEGLIVHEHRLPHVLLQLGTTFFKLPGGELNPGEDEVEGLKRLMTEILGRQDGVLDWV
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 IISLPLQLLSRFNFIYN

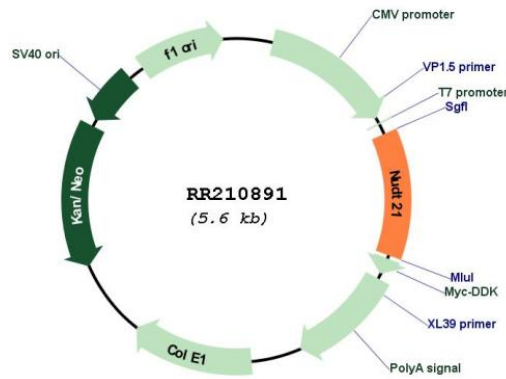
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001039004

ORF Size: 681 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:	NM_001039004.1 , NP_001034093.1
RefSeq Size:	1074 bp
RefSeq ORF:	684 bp
Locus ID:	291877
UniProt ID:	Q4KM65
Cytogenetics:	19p12
MW:	26.2 kDa
Gene Summary:	<p>Component of the cleavage factor Im (CFIm) complex that functions as an activator of the pre-mRNA 3'-end cleavage and polyadenylation processing required for the maturation of pre-mRNA into functional mRNAs. CFIm contributes to the recruitment of multiprotein complexes on specific sequences on the pre-mRNA 3'-end, so called cleavage and polyadenylation signals (pA signals). Most pre-mRNAs contain multiple pA signals, resulting in alternative cleavage and polyadenylation (APA) producing mRNAs with variable 3'-end formation. The CFIm complex acts as a key regulator of cleavage and polyadenylation site choice during APA through its binding to 5'-UGUA-3' elements localized in the 3'-untranslated region (UTR) for a huge number of pre-mRNAs. NUDT21/CPSF5 activates indirectly the mRNA 3'-processing machinery by recruiting CPSF6 and/or CPSF7. Binds to 5'-UGUA-3' elements localized upstream of pA signals that act as enhancers of pre-mRNA 3'-end processing. The homodimer mediates simultaneous sequence-specific recognition of two 5'-UGUA-3' elements within the pre-mRNA. Plays a role in somatic cell fate transitions and pluripotency by regulating widespread changes in gene expression through an APA-dependent function. Binds to chromatin. Binds to, but does not hydrolyze mono- and di-adenosine nucleotides. [UniProtKB/Swiss-Prot Function]</p>