

Product datasheet for **RN210891**

Nudt21 (NM_001039004) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Nudt21 (NM_001039004) Rat Untagged Clone
Tag: Tag Free
Symbol: Nudt21
Synonyms: Cpsf5
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >RN210891 representing NM_001039004
Red=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGTCTGTGGTCCGCCCAATCGCTCGCAGACGGGCTGGCCCCGGGGGTCAACCAATTCGGTAACAAGT
ACATCCAGCAAACCAAGCCCCTCACCTGGAGCGCACCATTAACCTGTACCCACTTACCAACTATACTTT
TGGTACAAAGGAGCCCCTCTATGAAAAGGACAGCTCTGTGGCGGCCAGATTTAGCGCATGCGGGAGGAA
TTTGATAAGATTGGGATGAGAAGGACTGTAGAAGGGTTCTGATCGTACACGAGCACCGCCTGCCCCAGC
TGCTACTGCTACAGCTGGGAACAACCTTCTCAAACCTACCTGGCGGTGAACCTAACCCAGGAGAAGATGA
AGTTGAAGGACTAAAACGCTTAATGACAGAGATACTGGGTCTCAAGATGGAGTCCCTGCAAGACTGGGTC
ATCGATGACTGCATTGGGAACCTGGTGGAGACCAAAATTTGAACCTCCTCAGTACCCGTATATTCCTGCAC
ATATAACAAAGCCCAAGGAACATAAGAAGTTGTTTCTGGTTCAGCTTCAAGAGAAAGCCTTGTTTGGCGT
CCCTAAGAATTACAAGCTGGTAGCTGCACCGTTGTTTGAACCTGTACGACAATGCTCCGGGATACGGACCC
ATCATTCTAGTCTTCTCAGCTGCTGAGCAGGTTAATTTTATATAACA**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001039004
Insert Size: 684 bp



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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).
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_001039004.1</u> , <u>NP_001034093.1</u>
RefSeq Size:	1074 bp
RefSeq ORF:	684 bp
Locus ID:	291877
UniProt ID:	<u>Q4KM65</u>
Cytogenetics:	19p12
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>