

## Product datasheet for **RC200131**

### **NAD Synthetase (NADSYN1) (NM\_018161) Human Tagged ORF Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | NAD Synthetase (NADSYN1) (NM_018161) Human Tagged ORF Clone |
| Tag:                      | Myc-DDK   |
| Symbol:                   | NAD Synthetase  |
| Synonyms:                 | VCRL3   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)                                      |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |



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ORF Nucleotide  
Sequence:

>RC200131 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGGCCGGAAGGTGACCGTGGCCACCTGCGCACTCAACCAGTGGGCCCTGGACTTCGAGGGCAATTTGC  
AAAGAATTTTAAAGAGTATTGAAATTGCCAAAAACAGAGGAGCAAGATACAGGCTTGGACCAGAGCTGGA  
AATATGCGGCTACGGATGTTGGGATCATTATTACGAGTCGGACACCCTCTTGCACCTGTTTCAAGTCCTA  
GCGGCCCTTCTGGAGTCTCCCGTCACTCAGGACATCATCTGCGACGTGGGGATGCCTGTAATGCACCGAA  
ACGTCCGCTACAACGAGAGTATTCCTCAACAGGAAGATCCTGCTCATCAGACCCAAGATGGCCTT  
GGCCAATGAAGGCAACTACCGCAGCTGCGCTGGTTCACCCCGTGGTTCGAGGAGTCGGCACACAGAGGAG  
TACTTTCTGCCTCGGATGATACAGGACCTGACAAAGCAGGAAACCGTACCCTTCGGAGATGCGGTGCTGG  
TGACATGGGACACCTGCATTGGAAGTGAGATCTGTGAGGAGCTCTGGACACCCACAGCCCGCACATCGA  
CATGGGCCCTGGATGGCGTGGAGATCATCAACAACGCTCGGGCAGCCACCACGTGCTGCGCAAAGCCAAC  
ACCAGGTTGGATCTCGTACTATGGTACCAGCAAGAACGGTGGGATTTACTTGTGGCCAAACCAGAAGG  
GTTGCGACGGGGACCGCCTGTAACGACGGCTGTGCCATGATCGCCATGAACGGAAGCGTCTTTGCTCA  
AGGATCCCAGTTTTCTCTGGATGACGTGGAAGTCTGACGGCCACGCTGGATCTGGAGGACGTCCGGAGC  
TACAGGGCGGAGATTTCTCTCGAAACCTGGCGGCCAGCAGGGCGAGCCCTACCCAGAGTGAAGTGG  
ACTTTGCCCTCTCGTCCACGAGGACTTGTCTGGACCCATCTCTGAGCCCATCGAGTGGAAATACCACAG  
CCCTGAGGAGGAGATAAGCCTTGGACCTGCCTGCTGGCTCTGGGATTTTTAAGACGAAGTCAACAGGCA  
GGGTTTTGCTGCCCTTGGTGGCGGGTGGACAGCGCAGCCACCGCCTGCCTCATCTACTCCATGTGCT  
GCCAGTCTGCGAGGCCGTGAGGAGTGGAAATGAGGAAGTGTGGCTGATGTCCGACCATCGTGAACCA  
GATCAGCTACACCCCGAGGATCCCGAGACCTCTGTGGACGCATACTGACCACCTGCTACATGGCCAGC  
AAGAACTCCTCCAGGAGACGTGACCCGGGCCAGAGAGTTGGCCAGCAGATTGGAAGCCACCACATCA  
GTCTCAACATCGATCCAGCCGTGAAGGCCGTGATGGGCATCTTACGCTGGTACGGGGAAGAGCCCTCT  
GTTTGCAGCTCATGGAGGAAGCAGCAGGGAAAACCTGGCGCTGCAAAATGTGCAGGCTCGAATACGGATG  
GTCCTCGCTATCTGTTTGTCTAGTTGAGCCTCTGGTCTCGGGTGTCCACGGTGGGCTCCTCGTGTGG  
GATCCGCCAACGTGGATGAGAGTCTCCTGGCTACCTGACCAAGTACGACTGCTCCAGTGGGACATCAA  
CCCCATAGGCGGGATCAGCAAGACGGACCTCAGGGCCTTCGTCCAGTTCTGCATCCAGCGCTTCCAGCTT  
CCTGCCCTGCAGAGCATCCTGTTGGCGCCGCCACCGCAGAGCTGGAGCCCTTGGCTGATGGACAGGTGT  
CCCAGACCAGGGAAGATATGGGGATGACATATGCGGAGCTCTCGGTCTATGGGAAACTCAGGAAGGT  
GGCCAAGATGGGGCCCTACAGCATGTTCTGCAAACTCCTCGGCATGTGGAGACACATCTGCACCCCGAGA  
CAGGTCGTGACAAAGTGAAGCGGTTTTCTCCAAGTACTCCATGAACAGACACAAGATGACCACGCTCA  
CACCCCGTACCACGCCGAGAATACAGCCCTGAGGACAACAGGTTTGTCTGCGACATTTCTGTACAA  
CACAAAGCTGGCCTTGGCAGTTTCGGTGCATAGAAAATCAGGTGCTACAGCTCGAGAGGGCAGAGCCACAG  
TCCCTGGACGGCGTGGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC200131 protein sequence  
 Red=Cloning site Green=Tags(s)

MGRKVTVATCALNQWALDFEGLNQRILKSIEIAKNRGARYRLGPELEICGYGCWDHYESDTLLHSFQVL  
 AALLESPTQDIICDVGMPVMHRNVRYNCRVIFLNRKILLIRPKMALANEGNYRELRFWTPWSRSRHTEE  
 YFLPRMIQDLTKQETVPFGDAVLVTWDTICIGSEICEELWTPHSPHIDMGLDGVETITNASGSHHVRKAN  
 TRVDLVTMVTSKNGGIYLLANQKGCDDRLYYDGCAMIAMNGSVFAQGSQFSLDDVEVLATLDLEDVRS  
 YRAEISSRNLAASRASPYPVKVDFALSCHEDLLAPISEPIEWKYHSPEEISLGPACWLWDFLRRSQQA  
 GFLLPLSGGVDSAATACLIYSMCCQVCEAVRSGNEEVLADVRTIVNQISYTPQDPRDLCGRILTTCYMAS  
 KNSSQETCTRARELAQQIGSHHISLNIDPAVKAVMGIFSLVTGKSPLFAAHGSSRENALQNVQARIRM  
 VLAYLFAQLSLWSRGVHGGLLVLSANVDESLLGYLTKYDCSSADINPIGGISKTDLRAFVQFCIQRFQL  
 PALQSILLAPATAELEPLADGQVSQTDEEDMGMTYAELSVYGKLRKVAKMGPYSMFCKLLGMWRHICTPR  
 QVADKVKRFFSKYSMNRHKMTTLTPAYHAENYSPEDNRFDLRPFLYNTSWPWQFRCIENQVLQLERAEPQ  
 SLDGVD

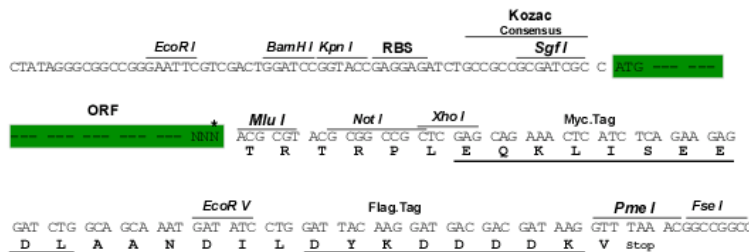
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk6291\\_c09.zip](https://cdn.origene.com/chromatograms/mk6291_c09.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



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

ACCN: NM\_018161

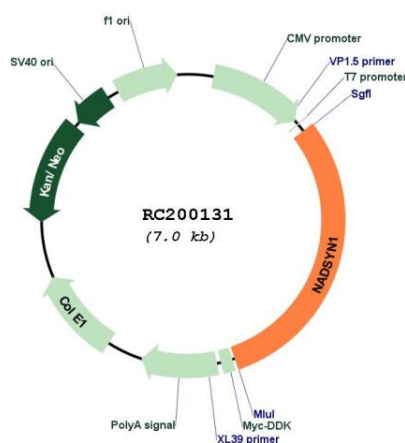
ORF Size: 2118 bp

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](#)

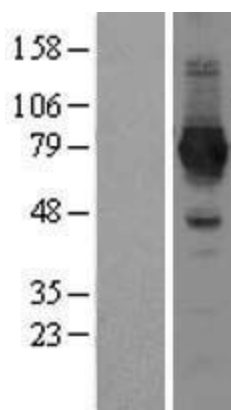
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

|                               |   |
|-------------------------------|---|
| <b>Components:</b>            | 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).  |
| <b>Reconstitution Method:</b> | <ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol> |
| <b>RefSeq:</b>                | <a href="#">NM_018161.3</a>   |
| <b>RefSeq Size:</b>           | 2453 bp   |
| <b>RefSeq ORF:</b>            | 2121 bp   |
| <b>Locus ID:</b>              | 55191   |
| <b>UniProt ID:</b>            | <a href="#">Q6IA69</a>  |
| <b>Cytogenetics:</b>          | 11q13.4   |
| <b>Domains:</b>               | CN_hydrolase, NAD_synthase  |
| <b>Protein Pathways:</b>      | Metabolic pathways, Nicotinate and nicotinamide metabolism  |
| <b>MW:</b>                    | 79.3 kDa  |
| <b>Gene Summary:</b>          | Nicotinamide adenine dinucleotide (NAD) is a coenzyme in metabolic redox reactions, a precursor for several cell signaling molecules, and a substrate for protein posttranslational modifications. NAD synthetase (EC 6.3.5.1) catalyzes the final step in the biosynthesis of NAD from nicotinic acid adenine dinucleotide (NaAD).[supplied by OMIM, Apr 2004]   |

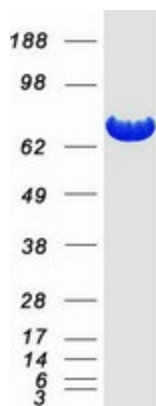
### Product images:



Circular map for RC200131



Western blot validation of overexpression lysate (Cat# [LY413259]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200131 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NADSYN1 protein (Cat# [TP300131]). The protein was produced from HEK293T cells transfected with NADSYN1 cDNA clone (Cat# RC200131) using MegaTran 2.0 (Cat# [TT210002]).