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Product datasheet for RR209368

Nono (NM_001012356) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nono (NM_001012356) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nono
Synonyms:	MGC109026
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>RR209368 representing NM_001012356
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGAGCAATAAAACCTTTAACTTGGAGAAGCAGAATCATACTCCAAGGAAGCACCATCAGCATCACC
ACCAGCAGCACCATCAGCAACAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCCACCCCCACCAATACC
TGCAAATGGACAGCAGGCCAGCAGCCAGAATGAAGGCTTGACTATTGACCTGAAGAATTTTAGGAAACCA
GGAGAGAAGACCTTTACCCAACGTAGCCGTCTCTTTGTGGGCAATCTTCCCCCTGACATCACTGAGGAGG
AAATGAGGAAACTTTTTGAGAAATATGGGAAAGCAGGCGAAGTTTTCATTCATAAGGATAAAGGCTTTGG
CTTTATTCGCTTGGAAACACGAACCCTAGCGGAAATTGCCAAAGTGGAGCTGGACAACATGCCACTCCGT
GGAAAGCAGCTGCGAGTGCGCTTTGCTTGTCATAGTGCATCCCTTACGGTTCGCAACCTTCCTCAGTACG
TGTCCAACGAACTGCTGGAAGAAGCCTTTTCTGTGTTTGGCCAGGTGGAGAGGGCTGTAGTCATTGTGGA
TGACCGAGGAAGGCCCTCGGGGAAAGGCATTGTTGAGTTCTCAGGGAAGCCAGCTGCTCGGAAAGCTCTG
GACAGATGCAGTGAAGGCTCCTTCTTGCTAACCACATTTCCTCGGCCTGTGACTGTGGAGCCTATGGACC
AGTTAGATGATGAAGAGGGACTTCCGGAGAAGTTGGTTATAAAAAACCAGCAATTTCACAAGGAGAGAGA
ACAGCCACCCAGATTTGCACAGCCTGGGTCCTTTGAGTATGAGTATGCCATGCGCTGGAAGGCTCTCATT
GAGATGGAGAAGCAACAGCAGGATCAAGTGGACCGAAACATCAAGGAGGCTCGTGAGAAGCTGGAGATGG
AGATGGAGGCAGCACGCCATGAGCACCAGGTTATGCTAATGAGGCAGGATTTGATGAGACGTCAAGAAGA
GCTTCGAAGAATGGAGGAGCTGCATAACCAAGAGGTTCAGAAACGAAAGCAGTTAGAACTCAGGCAGGAA
GAGGAACGCAGGCGCCGTGAGGAAGAGATGCGGCGACAGCAAGAAGAAATGATGCGACGGCAGCAGGAAG
GATTCAAGGGAACCTTCCCTGATGCGAGAGAACAAGAGATACGGATGGGCCAAATGGCTATGGGAGGTGC
CATGGGCATAAACAATAGAGGCGCCATGCCCCCTGCTCCTGTGCCACCTGGTACTCCAGCTCCTCCAGGA
CCTGCTGCTATGATGCCAGATGGAACCCTTGGATTGACTCCACCAACAACTGAACGTTTTGGCCAAGCTG
CTACAATGGAAGGAATTGGAGCAATTGGTGGAACTCCTCCTGCATTCAACCGTCCAGCTCCTGGAGCTGA
ATTTGCTCCAAATAAACGCCGCCGATAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR209368 representing NM_001012356
Red=Cloning site Green=Tags(s)

MQSNKTFNLEKQNHTPRKHHQHHHQQHHQQQQQQQQQQQQPPPPIPANGQQASSQNEGLTIDLKNFRKP
GEKTFTQRSRLFVGNLPPDITEEEMRKLFEKYGKAGEVFIHKDKGFGFIRLETRTLAEIAKVELDNMPLR
GKQLRVRFACHSASLTVRNLPQYVSNELLEEAFSVFGQVERAVVIVDDRGRPSGKGIVEFSGKPAARKAL
DRCSEGSFLLTTFPRPVTVEPMDQLDDEEGLPEKLVIKNQQFHKEREQPPRFAQPGSFEYEYAMRWKALI
EMEKQQQDQVDRNIKEAREKLEMEMEAARHEHQVMLMRQDLMRRQEELRRMEELHNQEVQKRKQLELRQE
EERRRREEEMRRQQEEMMRRQQEGFKGTFPDAREQEIRMGQMAMGGAMGINNRGAMPPAPVPPGTPAPPG
PAAMMPDGTLGLTPPTTERFGQAATMEGIGAIGGTPPAFNRPAPGAEFAPNKRRRY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

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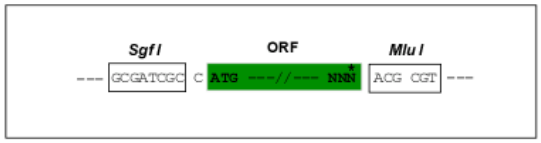
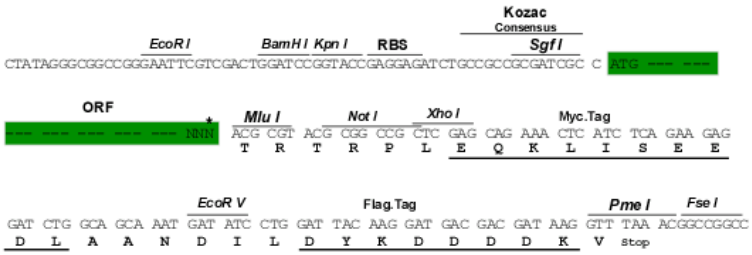
Cloning Scheme:





* The last codon before the Stop codon of the ORF

ACCN: NM_001012356

ORF Size: 1428 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:
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_001012356.1, NP_001012356.1

RefSeq Size: 2438 bp

RefSeq ORF: 1431 bp

Locus ID: 317259

UniProt ID: Q5FVM4

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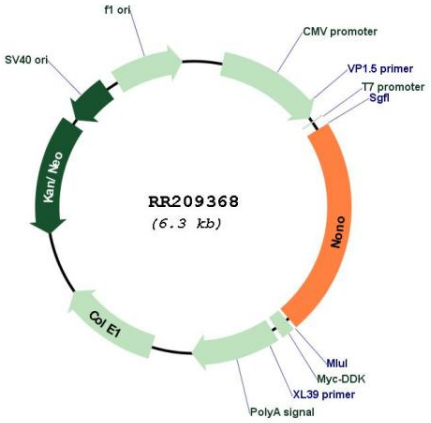
Cytogenetics: Xq22

MW: 54.9 kDa

Gene Summary: DNA- and RNA binding protein, involved in several nuclear processes. Binds the conventional octamer sequence in double-stranded DNA. Also binds single-stranded DNA and RNA at a site independent of the duplex site. Involved in pre-mRNA splicing, probably as a heterodimer with SFPQ. Interacts with U5 snRNA, probably by binding to a purine-rich sequence located on the 3' side of U5 snRNA stem 1b. Together with PSPC1, required for the formation of nuclear paraspeckles. The SFPQ-NONO heteromer associated with MATR3 may play a role in nuclear retention of defective RNAs. The SFPQ-NONO heteromer may be involved in DNA unwinding by modulating the function of topoisomerase I/TOP1. The SFPQ-NONO heteromer may be involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination and may stabilize paired DNA ends. In vitro, the complex strongly stimulates DNA end joining, binds directly to the DNA substrates and cooperates with the Ku70/G22P1-Ku80/XRCC5 (Ku) dimer to establish a functional preligation complex. NONO is involved in transcriptional regulation. The SFPQ-NONO-NR5A1 complex binds to the CYP17 promoter and regulates basal and cAMP-dependent transcriptional activity. NONO binds to an enhancer element in long terminal repeats of endogenous intracisternal A particles (IAPs) and activates transcription. Regulates the circadian clock by repressing the transcriptional activator activity of the CLOCK-ARNTL/BMAL1 heterodimer. Important for the functional organization of GABAergic synapses. Plays a specific and important role in the regulation of synaptic RNAs and GPHN/gephyrin scaffold structure, through the regulation of GABRA2 transcript. Plays a role in the regulation of DNA virus-mediated innate immune response by assembling into the HDP-RNP complex, a complex that serves as a platform for IRF3 phosphorylation and subsequent innate immune response activation through the cGAS-STING pathway.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR209368

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