

## Product datasheet for **MR230080**

### Nono (NM\_001252518) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Nono (NM_001252518) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nono
Synonyms:	AA407051; AV149256; nonA; NRB54; P54NRB
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR230080 representing NM\_001252518  
 Red=Cloning site Blue=ORF Green=Tags(s)  
 TTTTGAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCAGAGCAATAAAGCCTTTAACTTGGAGAAGCAGAATCATACTCCAAGGAAGCATCATCAGCATCACC  
 ACCAGCAGCACCATCAGCAGCAACAGCAGCAGCAGCAACAGCCACCCACCAATACCTGCAAATGG  
 CCAGCAGGCCAGCAGCCAGAATGAAGGCTTACTATTGACCTGAAGAATTTAGGAAACCAGGAGAGAAG  
 ACCTTTACACAGCGTAGCCGTCTCTTTGTGGGCAATCTTCCCCTGATATCACTGAGGAGGAAATGAGGA  
 AACTATTTGAGAAATATGGAAAAGCAGGCGAAGTTTTCATTTCATAAGGATAAAGGCTTTGGCTTTATTTCG  
 CTTGGAACACGAAACCTAGCGGAAATGCCAAAGTGGAGCTGGACAACATGCCCTCCGTGGGAAGCAG  
 CTGCGAGTGCCTTTGCCTGTACAGTGCATCCCTTACAGTCCGCAACCTTCCTCAGTACGTGTCGAACG  
 AACTGCTGGAAGAAGCCTTTTCTGTGTTGCGCCAGGTGGAGAGGGCTGTAGTCATTGTGGATGACCGAGG  
 AAGGCCCTCAGGAAAGGCATTGTTGAGTTCTCAGGGAAGCCAGCTGCTCGGAAAGCTCTGGACAGATGC  
 AGTGAAGGCTCCTTCTGCTGACTACATTTCTCGGCCTGTGACTGTGGAGCCTATGGACCAGTTAGATG  
 ATGAAGAGGGACTTCCAGAGAACTGGTTATAAAAAACCAGCAATTCACAAGGAGAGAGAACAGCCACC  
 CAGATTTGCACAACCTGGCTCCTTTGAGTATGAGTATGCCATGCGCTGGAAGGCACTCATTGAGATGGAG  
 AAGCAACAGCAGGATCAAGTGGATCGGAACATCAAGGAGGCTCGTGAGAAGCTGGAGATGGAGATGGAGG  
 CTGCACGTCAAGCACCAGGTTATGCTAATGAGGCAGGATTTGATGAGACGTCAAGAAGAGCTTCGGAG  
 AATGGAGGAGCTGCATAACCAAGAGGTTTCAAGAGCAAGCAAGTATAGAACTCAGGCAGGAAGAGGAACGC  
 AGGCGCCGTGAGGAAGAGATGCGGCGACAGCAAGAGGAAATGATGCGCCGACAGCAGGAAGGATTCAGG  
 GAACCTTCCCTGATGCGAGAGAACAAGAGATACGGATGGGCCAAATGGCTATGGGAGGTGCTATGGGCAT  
 AAACAATAGAGGCGGATGCCCCCTGCTCCTGTGCCACCTGGTACTCCAGCTCCTCCAGGACCTGCCACT  
 ATGATGCCAGATGGAACCTTGGATTGACCCACCAACAACCTGAACGTTTTGGCCAAAGCTGCAACAATGG  
 AAGGAATTGGAGCAATTGGTGAACCTCCTCCTGCATTCAACCGTCCAGCTCCGGGAGCTGAATTTGCTCC  
 AAATAACGCGCCGATAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR230080 representing NM\_001252518  
 Red=Cloning site Green=Tags(s)  
 MQSNKAFNLEKQNHTPRKHQHQQHHQHHQQQQQQPPPIIPANGQQASSQNEGLTIDLKNFRKPGEK  
 TFTQRSRLFVGNLPPDITEEEMRKLFEKYGKAGEVFIHKDKGFGFIRLETRTLAEIAKVELDNMPLRGKQ  
 LRVRFACHSASLTVRNLPQYVSNELLEAFSVFGQVERAVVIVDDRGRPSGKGI VEFSGKPAARKALDRC  
 SEGSFLLTTFFRPVTVPEMDQLDDEEGLPEKLVIKNQQFHKEREQPPRFAQPGSFEYAYMRWKAL IEME  
 KQQDQVDRNIKEAREKLEMEME AARHEHQVMLMRQDL MRRQEELRRMEELHNQEVQKRKQLELRQEEER  
 RRREEEMRRQEEEMRRQEGFKGTFPDAREQEIRMGQMAMGGAMGINNRGAMPPAPVPPGTPAPPGPAT  
 MMPDGLGLTPPTTERFGQAATMEGIGAI GGTPPAFNRPAPGAEFAPNKRRRY

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Restriction Sites:**

SgfI-MluI



**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\\_001252518.1](#), [NP\\_001239447.1](#)

**RefSeq Size:** 2465 bp

**RefSeq ORF:** 1422 bp

**Locus ID:** 53610

**UniProt ID:** [Q99K48](#)

**Cytogenetics:** X D

**MW:** 55 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 (PubMed:26571461). 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]