

NONO Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13781a**Specification**

NONO Antibody (N-term) - Product Information

Application	IHC-P, WB,E
Primary Accession	Q15233
Other Accession	Q5FVM4 , Q99K48 , NP_031389.3 , NP_001138881.1 , NP_001138882.1 , NP_001138880.1
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	54232
Antigen Region	45-74

NONO Antibody (N-term) - Additional Information**Gene ID** 4841**Other Names**

Non-POU domain-containing octamer-binding protein, NonO protein, 54 kDa nuclear RNA- and DNA-binding protein, 55 kDa nuclear protein, DNA-binding p52/p100 complex, 52 kDa subunit, NMT55, p54(nrb), p54nrb, NONO, NRB54

Target/Specificity

This NONO antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 45-74 amino acids from the N-terminal region of human NONO.

Dilution

IHC-P~~1:10~50

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

NONO Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

NONO Antibody (N-term) - Protein Information

Name NONO {ECO:0000303|PubMed:9393982, ECO:0000312|HGNC:HGNC:7871}

Function DNA- and RNA binding protein, involved in several nuclear processes (PubMed:[11525732](#), PubMed:[12403470](#), PubMed:[26571461](#)). Binds the conventional octamer sequence in double-stranded DNA (PubMed:[11525732](#), PubMed:[12403470](#), PubMed:[26571461](#)). Also binds single- stranded DNA and RNA at a site independent of the duplex site (PubMed:[11525732](#), PubMed:[12403470](#), PubMed:[26571461](#)). Involved in pre- mRNA splicing, probably as a heterodimer with SFPQ (PubMed:[11525732](#), PubMed:[12403470](#), PubMed:[26571461](#)). Interacts with U5 snRNA, probably by binding to a purine-rich sequence located on the 3' side of U5 snRNA stem 1b (PubMed:[12403470](#)). Together with PSPC1, required for the formation of nuclear paraspeckles (PubMed:[22416126](#)). The SFPQ-NONO heteromer associated with MATR3 may play a role in nuclear retention of defective RNAs (PubMed:[11525732](#)). The SFPQ-NONO heteromer may be involved in DNA unwinding by modulating the function of topoisomerase I/TOPI (PubMed:[10858305](#)). 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 (PubMed:[15590677](#)). 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 (PubMed:[15590677](#)). NONO is involved in transcriptional regulation. The SFPQ-NONO-NR5A1 complex binds to the CYP17 promoter and regulates basal and cAMP-dependent transcriptional activity (PubMed:[11897684](#)). NONO binds to an enhancer element in long terminal repeats of endogenous intracisternal A particles (IAPs) and activates transcription (By similarity). Regulates the circadian clock by repressing the transcriptional activator activity of the CLOCK-BMAL1 heterodimer (By similarity). Important for the functional organization of GABAergic synapses (By similarity). Plays a specific and important role in the regulation of synaptic RNAs and GPHN/gephyrin scaffold structure, through the regulation of GABRA2 transcript (By similarity). Plays a key role during neuronal differentiation by recruiting TET1 to genomic loci and thereby regulating 5-hydroxymethylcytosine levels (By similarity). 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 (PubMed:[28712728](#), PubMed:[30270045](#)). Promotes activation of the cGAS-STING pathway in response to HIV-2 infection: acts by interacting with HIV-2 Capsid protein p24, thereby promoting detection of viral DNA by CGAS, leading to CGAS-mediated immune activation (PubMed:[30270045](#)). In contrast, the weak interaction with HIV-1 Capsid protein p24 does not allow activation of the cGAS-STING pathway (PubMed:[30270045](#)).

Cellular Location

Nucleus. Nucleus, nucleolus. Nucleus speckle. Chromosome {ECO:0000250|UniProtKB:Q99K48}. Note=Detected in punctate subnuclear structures often located adjacent to splicing speckles, called paraspeckles.

Tissue Location

Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Also found in a number of breast tumor cell lines.

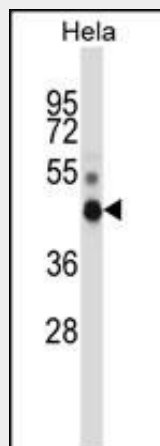
NONO Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

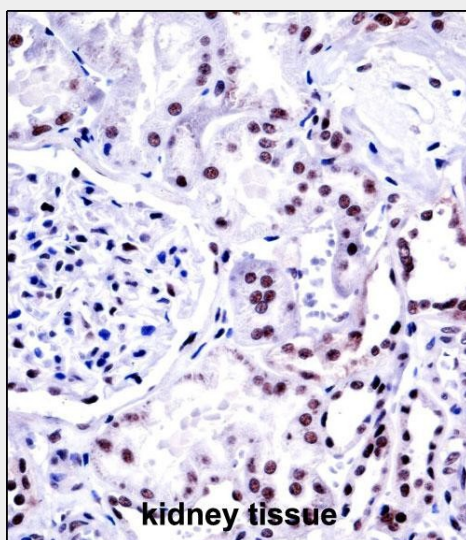
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

NONO Antibody (N-term) - Images



NONO Antibody (N-term) (Cat. #AP13781a) western blot analysis in Hela cell line lysates (35ug/lane). This demonstrates the NONO antibody detected the NONO protein (arrow).



NONO Antibody (N-term) (AP13781a) immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of NONO Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

NONO Antibody (N-term) - Background

This gene encodes an RNA-binding protein which plays various roles in the nucleus, including transcriptional regulation and RNA splicing. A rearrangement between this gene and the transcription factor E3 gene has been observed in papillary renal cell carcinoma. Alternatively spliced transcript variants have been described. Pseudogenes exist on Chromosomes 2 and 16. [provided by RefSeq].

NONO Antibody (N-term) - References

Marko, M., et al. Exp. Cell Res. 316(3):390-400(2010)
Dong, X., et al. Mol. Endocrinol. 23(8):1147-1160(2009)
Sikora, D., et al. Virology 390(1):71-78(2009)
Clemson, C.M., et al. Mol. Cell 33(6):717-726(2009)
Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)