

**NONO / P54NRB Antibody (C-Terminus)**  
**Goat Polyclonal Antibody**  
**Catalog # ALS13316****Specification**

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**NONO / P54NRB Antibody (C-Terminus) - Product Information**

Application	IHC
Primary Accession	<a href="#">Q15233</a>
Reactivity	Human, Mouse, Monkey, Horse, Bovine, Dog
Host	Goat
Clonality	Polyclonal
Calculated MW	54kDa KDa

**NONO / P54NRB Antibody (C-Terminus) - 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**

Human NONO.

**Reconstitution & Storage**

Store at -20°C. Minimize freezing and thawing.

**Precautions**

NONO / P54NRB Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

**NONO / P54NRB Antibody (C-Terminus) - 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:<a href="http://www.uniprot.org/citations/11525732" target="\_blank">11525732</a>, PubMed:<a href="http://www.uniprot.org/citations/12403470" target="\_blank">12403470</a>, PubMed:<a href="http://www.uniprot.org/citations/26571461" target="\_blank">26571461</a>). Binds the conventional octamer sequence in double-stranded DNA (PubMed:<a href="http://www.uniprot.org/citations/11525732" target="\_blank">11525732</a>, PubMed:<a href="http://www.uniprot.org/citations/12403470" target="\_blank">12403470</a>, PubMed:<a href="http://www.uniprot.org/citations/26571461" target="\_blank">26571461</a>). Also binds single- stranded DNA and RNA at a site independent of the duplex site (PubMed:<a href="http://www.uniprot.org/citations/11525732" target="\_blank">11525732</a>, PubMed:<a href="http://www.uniprot.org/citations/12403470" target="\_blank">12403470</a>, PubMed:<a href="http://www.uniprot.org/citations/26571461" target="\_blank">26571461</a>).

<http://www.uniprot.org/citations/12403470> target="\_blank">12403470</a>, PubMed:<a href="http://www.uniprot.org/citations/26571461" target="\_blank">26571461</a>). Involved in pre- mRNA splicing, probably as a heterodimer with SFPQ (PubMed:<a href="http://www.uniprot.org/citations/11525732" target="\_blank">11525732</a>, PubMed:<a href="http://www.uniprot.org/citations/12403470" target="\_blank">12403470</a>, PubMed:<a href="http://www.uniprot.org/citations/26571461" target="\_blank">26571461</a>). Interacts with U5 snRNA, probably by binding to a purine-rich sequence located on the 3' side of U5 snRNA stem 1b (PubMed:<a href="http://www.uniprot.org/citations/12403470" target="\_blank">12403470</a>). Together with PSPC1, required for the formation of nuclear paraspeckles (PubMed:<a href="http://www.uniprot.org/citations/22416126" target="\_blank">22416126</a>). The SFPQ-NONO heteromer associated with MATR3 may play a role in nuclear retention of defective RNAs (PubMed:<a href="http://www.uniprot.org/citations/11525732" target="\_blank">11525732</a>). The SFPQ-NONO heteromer may be involved in DNA unwinding by modulating the function of topoisomerase I/TOP1 (PubMed:<a href="http://www.uniprot.org/citations/10858305" target="\_blank">10858305</a>). 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:<a href="http://www.uniprot.org/citations/15590677" target="\_blank">15590677</a>). 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:<a href="http://www.uniprot.org/citations/15590677" target="\_blank">15590677</a>). 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:<a href="http://www.uniprot.org/citations/11897684" target="\_blank">11897684</a>). 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:<a href="http://www.uniprot.org/citations/28712728" target="\_blank">28712728</a>, PubMed:<a href="http://www.uniprot.org/citations/30270045" target="\_blank">30270045</a>). 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:<a href="http://www.uniprot.org/citations/30270045" target="\_blank">30270045</a>). In contrast, the weak interaction with HIV-1 Capsid protein p24 does not allow activation of the cGAS-STING pathway (PubMed:<a href="http://www.uniprot.org/citations/30270045" target="\_blank">30270045</a>).

#### **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**

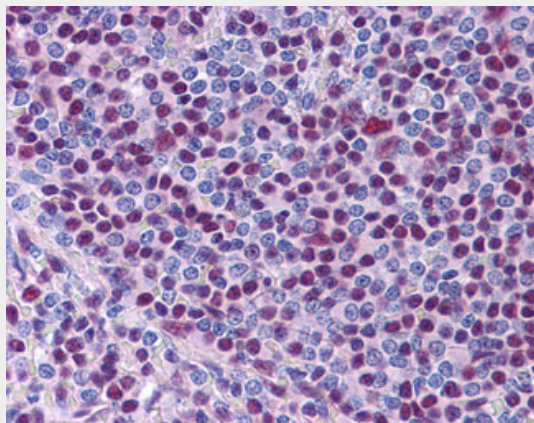
Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Also found in a number of breast tumor cell lines.

#### **NONO / P54NRB Antibody (C-Terminus) - Protocols**

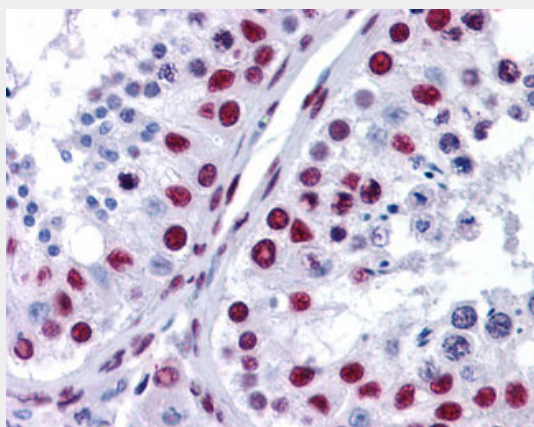
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **NONO / P54NRB Antibody (C-Terminus) - Images**



Anti-NONO antibody IHC of human spleen.



Anti-NONO antibody IHC of human testis.

#### **NONO / P54NRB Antibody (C-Terminus) - Background**

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.

#### **NONO / P54NRB Antibody (C-Terminus) - References**

Dong B., et al. Nucleic Acids Res. 21:4085-4092(1993).  
Traish A.M., et al. Diagn. Mol. Pathol. 6:209-221(1997).  
Peters U., et al. Hum. Genet. 100:569-572(1997).  
Honore B., et al. Submitted (JAN-1994) to the EMBL/GenBank/DDBJ databases.  
Ota T., et al. Nat. Genet. 36:40-45(2004).