

NONO / P54NRB Antibody (clone 4D9)
Mouse Monoclonal Antibody
Catalog # ALS16463**Specification****NONO / P54NRB Antibody (clone 4D9) - Product Information**

Application	WB, IF, IHC
Primary Accession	Q15233
Reactivity	Human, Mouse, Rat, Monkey, Dog
Host	Mouse
Clonality	Monoclonal
Calculated MW	54kDa KDa

NONO / P54NRB Antibody (clone 4D9) - 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 / P54NRB

Reconstitution & Storage

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

Precautions

NONO / P54NRB Antibody (clone 4D9) is for research use only and not for use in diagnostic or therapeutic procedures.

NONO / P54NRB Antibody (clone 4D9) - 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).

[26571461](http://www.uniprot.org/citations/26571461)). Involved in pre- mRNA splicing, probably as a heterodimer with SFPQ (PubMed:[11525732](http://www.uniprot.org/citations/11525732), PubMed:[12403470](http://www.uniprot.org/citations/12403470), PubMed:[26571461](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/12403470)). Together with PSPC1, required for the formation of nuclear paraspeckles (PubMed:[22416126](http://www.uniprot.org/citations/22416126)). The SFPQ-NONO heteromer associated with MATR3 may play a role in nuclear retention of defective RNAs (PubMed:[11525732](http://www.uniprot.org/citations/11525732)). The SFPQ-NONO heteromer may be involved in DNA unwinding by modulating the function of topoisomerase I/TOP1 (PubMed:[10858305](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/28712728), PubMed:[30270045](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/30270045)). In contrast, the weak interaction with HIV-1 Capsid protein p24 does not allow activation of the cGAS-STING pathway (PubMed:[30270045](http://www.uniprot.org/citations/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.

Volume

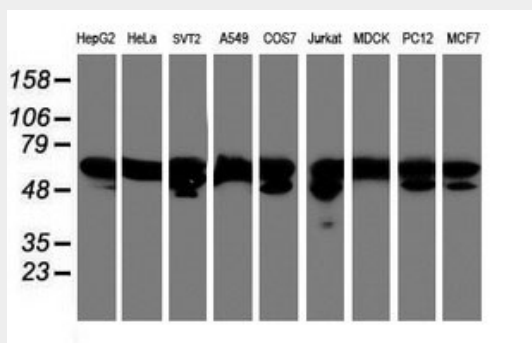
50 µl

NONO / P54NRB Antibody (clone 4D9) - Protocols

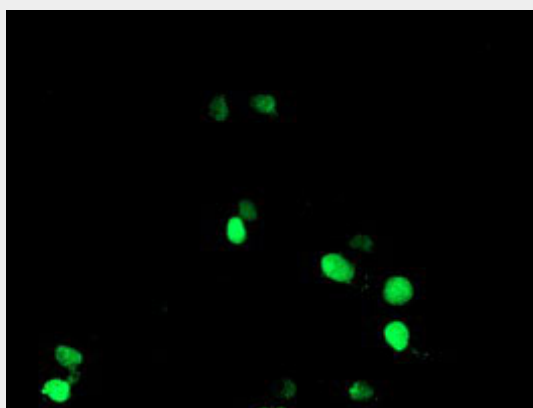
Provided below are standard protocols that you may find useful for product applications.

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

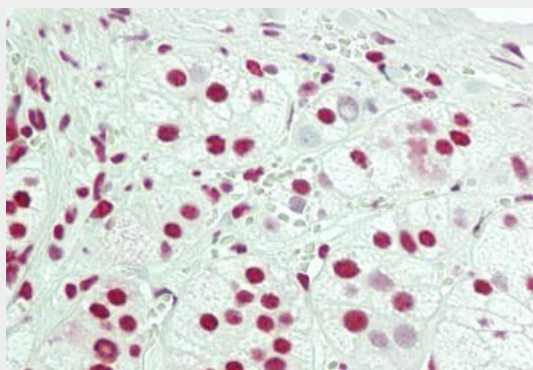
NONO / P54NRB Antibody (clone 4D9) - Images



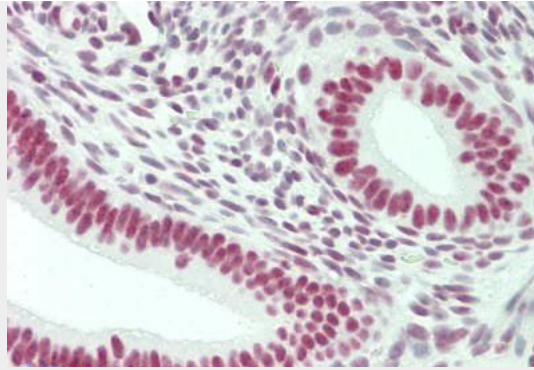
Western blot of extracts (35 ug) from 9 different cell lines by using g anti-NONO monoclonal...



Anti-NONO mouse monoclonal antibody immunofluorescent staining of COS7 cells transiently...



Human Adrenal: Formalin-Fixed, Paraffin-Embedded (FFPE)



Human Uterus: Formalin-Fixed, Paraffin-Embedded (FFPE)

NONO / P54NRB Antibody (clone 4D9) - Background

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NONO / P54NRB Antibody (clone 4D9) - 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).