

Anti-NONO / p54nrb Rabbit Monoclonal Antibody

Catalog # ABO15416

Product Information

Application	WB, IHC, IF, ICC
Primary Accession	Q15233
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-NONO / p54nrb Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	4841
Other Names	Non-POU domain-containing octamer-binding protein, NonO protein, 54 kDa nuclear RNA- and DNA-binding protein, p54(nrb), p54nrb, 55 kDa nuclear protein, NMT55, DNA-binding p52/p100 complex, 52 kDa subunit, NONO {ECO:0000303 PubMed:9393982, ECO:0000312 HGNC:HGNC:7871}
Calculated MW	54232
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 ICC/IF 1:100-1:500
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 19N92
Immunogen	A synthesized peptide derived from human NONO / p54nrb
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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/TOP1 (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

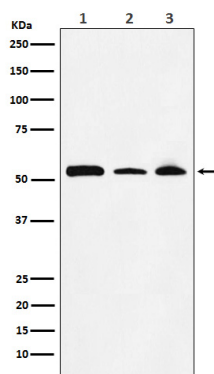
Nucleus. Nucleus, nucleolus. Nucleus speckle. Chromosome {ECO:0000250|UniProtKB:Q99K48}. Note=Detected in punctate subnuclear structures often located adjacent to splicing speckles, called paraspeckles.

Tissue Location

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

Images

Western blot analysis of NONO / p54nrb expression in (1) MOLT4 cell lysate; (2) NIH/3T3 cell lysate; (3) PC12 cell lysate.



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