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# Goat Anti-NONO / p54NRB Antibody (C Terminus), biotinylated

Catalog # AF4288a

#### **Product Information**

Application WB, E Primary Accession Q15233

Other Accession NP\_031389.3, 317259, 53610, 4841

**Reactivity** Human, Mouse

**Predicted** Human, Mouse, Rat, Dog

Host Goat Isotype IgG Calculated MW 54232

### **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

**Dilution** WB~~1:1000 E~~N/A

**Storage** Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions** Goat Anti-NONO / p54NRB Antibody (C Terminus), biotinylated is for research

use only and not for use in diagnostic or therapeutic procedures.

#### **Protein Information**

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). Interests with LIS as PNA are bable, by his disperse.

PubMed:<u>26571461</u>). Interacts with U5 snRNA, probably by binding to a purine-rich sequence located on the 3' side of U5 snRNA stem 1b (PubMed:<u>12403470</u>). Together with PSPC1, required for the formation of nuclear paraspeckles (PubMed:<u>22416126</u>). 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)] 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 inmmune 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**



Biotinylated AF4288a (0.1  $\mu$ g/ml) staining of mouse brain lysate (35  $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.