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NONO Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP13781a

Specification

NONO Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q15233

NONO Antibody (N-term) Blocking peptide - 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
The synthetic peptide sequence used to generate the antibody AP13781a was selected from the N-term region of NONO. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NONO Antibody (N-term) Blocking peptide - 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:<a

href="http://www.uniprot.org/citations/26571461" target="_blank">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 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.

NONO Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

NONO Antibody (N-term) Blocking peptide - Images

NONO Antibody (N-term) Blocking peptide - Background

This gene encodes an RNA-binding protein which playsvarious roles in the nucleus, including transcriptional regulationand RNA splicing. A rearrangement between this gene and thetranscription factor E3 gene has been observed in papillary renalcell carcinoma. Alternatively spliced transcript variants have beendescribed. Pseudogenes exist on Chromosomes 2 and 16. [provided byRefSeq].

NONO Antibody (N-term) Blocking peptide - 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)