

## NONO Polyclonal Antibody

Catalog No: #42655

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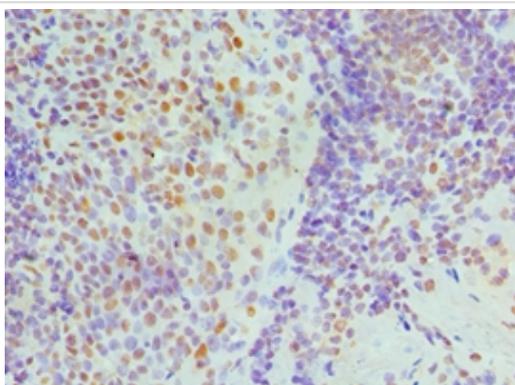
## Description

Product Name	NONO Polyclonal Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antigen Affinity Purified
Applications	IHC
Species Reactivity	Hu
Specificity	The antibody detects endogenous level of total NONO polyclonal antibody.
Immunogen Type	protein
Immunogen Description	Recombinant human Non-POU domain-containing octamer-binding protein(1-300aa)
Target Name	NONO
Other Names	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
Accession No.	Swiss-Prot#: Q15233
Uniprot	Q15233
GeneID	4841;
Concentration	1.0mg/mL
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage	Store at -20°C

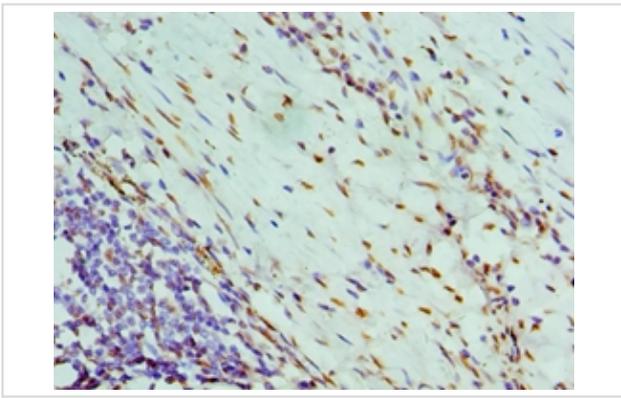
## Application Details

Immunohistochemistry: 1:20 - 1:200

## Images



Immunohistochemical analysis of paraffin-embedded human tonsil using #42655 at dilution of 1:100.



Immunohistochemical analysis of paraffin-embedded human colon cancer using #42655 at dilution of 1:100.

## 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.

## References

- [1]Structure of the heterodimer of human NONO and paraspeckle protein component 1 and analysis of its role in subnuclear body formation."Passon D.M., Lee M., Rackham O., Stanley W.A., Sadowska A., Filipovska A., Fox A.H., Bond C.S.Proc. Natl. Acad. Sci. U.S.A. 109:4846-4850(2012).
- [2]Systematic analysis of protein pools, isoforms, and modifications affecting turnover and subcellular localization."Ahmad Y., Boisvert F.M., Lundberg E., Uhlen M., Lamond A.I.Mol. Cell. Proteomics 11:M111.013680.01M111.013680.15(2012).
- [3]System-wide temporal characterization of the proteome and phosphoproteome of human embryonic stem cell differentiation."Rigbolt K.T., Prokhorova T.A., Akimov V., Henningsen J., Johansen P.T., Kratchmarova I., Kassem M., Mann M., Olsen J.V., Blagoev B.Sci. Signal. 4:RS3-RS3(2011).

Note: This product is for in vitro research use only