10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-nmt55/p54nrb Picoband Antibody

Catalog # ABO12561

Specification

Anti-nmt55/p54nrb Picoband Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	Q15233
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Non-POU domain-containing octamer-binding protein(NONO) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-nmt55/p54nrb Picoband Antibody - 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

Calculated MW
54232 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization
Nucleus. Nucleus, nucleolus. Nucleus speckle. Detected in punctate subnuclear structures often located adjacent to splicing speckles, called paraspeckles.

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

Protein Name
Non-POU domain-containing octamer-binding protein

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human nmt55/p54nrb (1-35aa MQSNKTFNLEKQNHTPRKHHQHHHQQQHHQQQQQQ), identical to the related mouse and rat sequences.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins.

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-nmt55/p54nrb Picoband Antibody - 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 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.

Anti-nmt55/p54nrb Picoband Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-nmt55/p54nrb Picoband Antibody - Images

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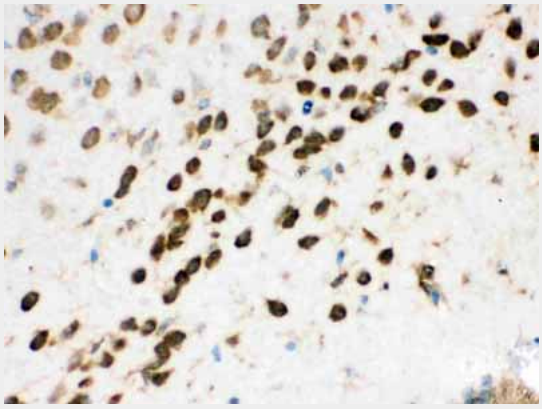
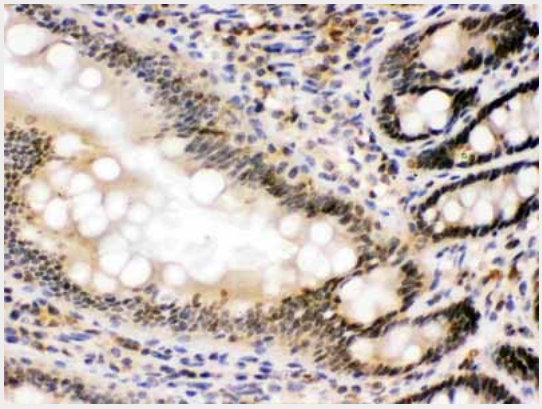
Western blot analysis of nmt55/p54nrb expression in rat brain extract (lane 1), human placenta extract (lane 2) and PANC whole cell lysates (lane 3). nmt55/p54nrb at 60KD was detected using rabbit anti-FBXL4 Antigen Affinity purified polyclonal antibody (Catalog # ABO12561) at0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .



nmt55/p54nrb was detected in paraffin-embedded sections of mouse brain tissues using rabbit anti- nmt55/p54nrb Antigen Affinity purified polyclonal antibody (Catalog # ABO12561) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .



nmt55/p54nrb was detected in paraffin-embedded sections of rat intestine tissues using rabbit anti- nmt55/p54nrb Antigen Affinity purified polyclonal antibody (Catalog # ABO12561) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .

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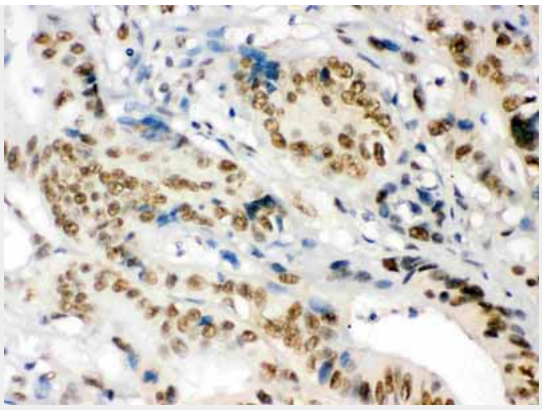

nmt55/p54nrb was detected in paraffin-embedded sections of human intestinal cancer tissues using rabbit anti- nmt55/p54nrb Antigen Affinity purified polyclonal antibody (Catalog # ABO12561) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .

Anti-nmt55/p54nrb Picoband Antibody - Background

Non-POU domain-containing octamer-binding proteinÂ is aÂ proteinÂ that in humans is encoded by theÂ NONO gene. This gene encodes an RNA-binding protein which plays various roles in the nucleus, including transcriptional regulation and RNA splicing. A rearrangement between this gene and the transcription factor E3 gene has been observed in papillary renal cell carcinoma. Alternatively spliced transcript variants have been described. Pseudogenes exist on Chromosomes 2 and 16.Â