

**NAT10 Antibody (N-Term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP22316a****Specification**

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**NAT10 Antibody (N-Term) - Product Information**

Application	WB, FC,E
Primary Accession	<a href="#">Q9H0A0</a>
Other Accession	<a href="#">Q8K224</a>
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	115730

**NAT10 Antibody (N-Term) - Additional Information****Gene ID** 55226**Other Names**

N-acetyltransferase 10, 2.3.1.-, NAT10, ALP, KIAA1709

**Target/Specificity**

This NAT10 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 146-178 amino acids from the mouse region of mouse NAT10.

**Dilution**

WB~~1:2000

FC~~1:25

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

NAT10 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

**NAT10 Antibody (N-Term) - Protein Information****Name** NAT10 {ECO:0000255|HAMAP-Rule:MF\_03211}

**Function** RNA cytidine acetyltransferase that catalyzes the formation of N(4)-acetylcytidine (ac4C) modification on mRNAs, 18S rRNA and tRNAs (PubMed:[25411247](#), PubMed:[25653167](#), PubMed:[30449621](#), PubMed:[35679869](#)). Catalyzes ac4C modification of a broad range of mRNAs, enhancing mRNA stability and translation (PubMed:[30449621](#), PubMed:[35679869](#)). mRNA ac4C modification is frequently present within wobble cytidine sites and promotes translation efficiency (PubMed:[30449621](#)). Mediates the formation of ac4C at position 1842 in 18S rRNA (PubMed:[25411247](#)). May also catalyze the formation of ac4C at position 1337 in 18S rRNA (By similarity). Required for early nucleolar cleavages of precursor rRNA at sites A0, A1 and A2 during 18S rRNA synthesis (PubMed:[25411247](#), PubMed:[25653167](#)). Catalyzes the formation of ac4C in serine and leucine tRNAs (By similarity). Requires the tRNA-binding adapter protein THUMP1 for full tRNA acetyltransferase activity but not for 18S rRNA acetylation (PubMed:[25653167](#)). In addition to RNA acetyltransferase activity, also able to acetylate lysine residues of proteins, such as histones, microtubules, p53/TP53 and MDM2, in vitro (PubMed:[14592445](#), PubMed:[17631499](#), PubMed:[19303003](#), PubMed:[26882543](#), PubMed:[27993683](#), PubMed:[30165671](#)). The relevance of the protein lysine acetyltransferase activity is however unsure in vivo (PubMed:[30449621](#)). Activates telomerase activity by stimulating the transcription of TERT, and may also regulate telomerase function by affecting the balance of telomerase subunit assembly, disassembly, and localization (PubMed:[14592445](#), PubMed:[18082603](#)). Involved in the regulation of centrosome duplication by acetylating CENATAC during mitosis, promoting SASS6 proteasome degradation (PubMed:[31722219](#)). Part of the small subunit (SSU) processome, first precursor of the small eukaryotic ribosomal subunit. During the assembly of the SSU processome in the nucleolus, many ribosome biogenesis factors, an RNA chaperone and ribosomal proteins associate with the nascent pre-rRNA and work in concert to generate RNA folding, modifications, rearrangements and cleavage as well as targeted degradation of pre-ribosomal RNA by the RNA exosome (PubMed:[34516797](#)).

#### Cellular Location

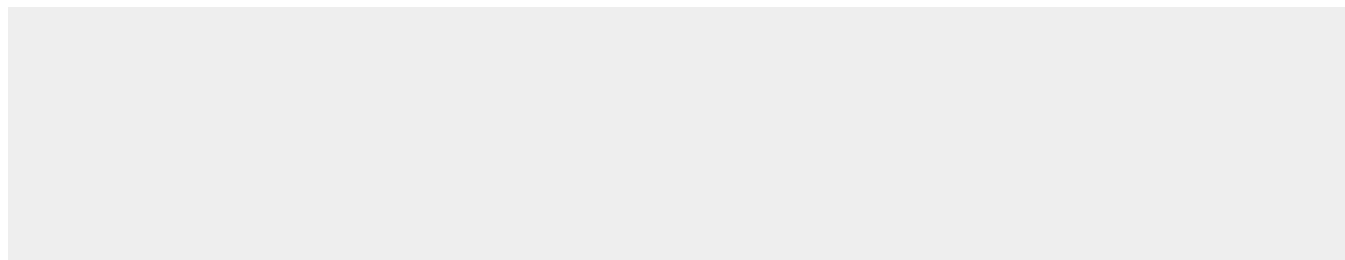
Nucleus, nucleolus {ECO:0000255|HAMAP- Rule:MF\_03211, ECO:0000269|PubMed:12429849, ECO:0000269|PubMed:14592445, ECO:0000269|PubMed:19303003, ECO:0000269|PubMed:24786082, ECO:0000269|PubMed:25653167, ECO:0000269|PubMed:30165671, ECO:0000269|PubMed:34516797}. Midbody {ECO:0000255|HAMAP-Rule:MF\_03211, ECO:0000269|PubMed:19303003} Note=Nucleolar in interphase and redistributes to the perichromosomal layer and to the midbody during telophase

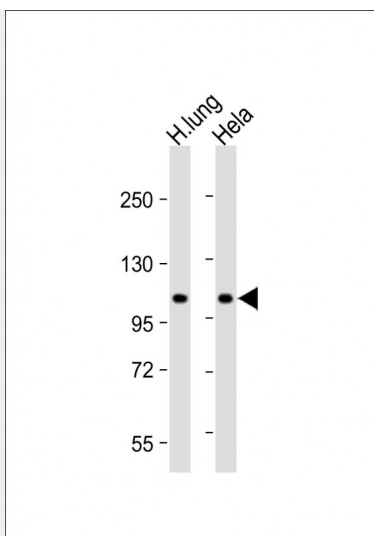
#### NAT10 Antibody (N-Term) - Protocols

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

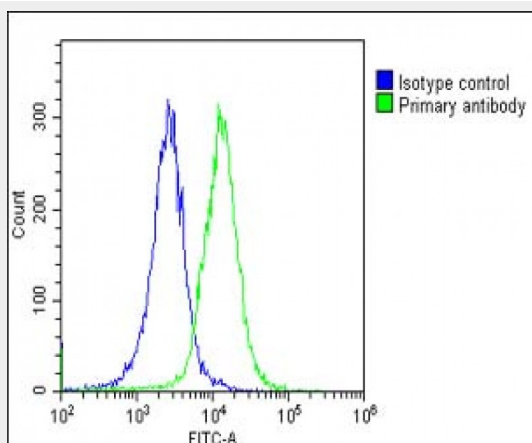
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### NAT10 Antibody (N-Term) - Images





All lanes : Anti-NAT10 Antibody (N-Term) at 1:2000 dilution Lane 1: Human lung lysate Lane 2: HeLa whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 116 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Overlay histogram showing HeLa cells stained with AP22316a(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22316a, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OE188374) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10, 000 events was performed.

### NAT10 Antibody (N-Term) - Background

Has protein acetyltransferase activity in vitro. Can acetylate both histones and microtubules. Histone acetylation may regulate transcription and mitotic chromosome de-condensation. Activates telomerase activity by stimulating the transcription of TERT, and may also regulate telomerase function by affecting the balance of telomerase subunit assembly, disassembly, and localization. Acetylates alpha-tubulin, which may affect microtubule stability and cell division.

### NAT10 Antibody (N-Term) - References

Nagase T.,et al.DNA Res. 7:347-355(2000).

Wiemann S.,et al.Genome Res. 11:422-435(2001).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Taylor T.D.,et al.Nature 440:497-500(2006).  
Lv J.,et al.Biochem. Biophys. Res. Commun. 311:506-513(2003).