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NAT10 Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS13700

Specification

NAT10 Antibody (Internal) - Product Information

Application	**IHC**
Primary Accession	Q9H0A0
Reactivity	**Human, Monkey, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**116kDa KDa**

NAT10 Antibody (Internal) - Additional Information

Gene ID 55226

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

Target/Specificity
Human NAT10.

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
NAT10 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

NAT10 Antibody (Internal) - 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 THUMPD1 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 (Internal) - 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

NAT10 Antibody (Internal) - Images

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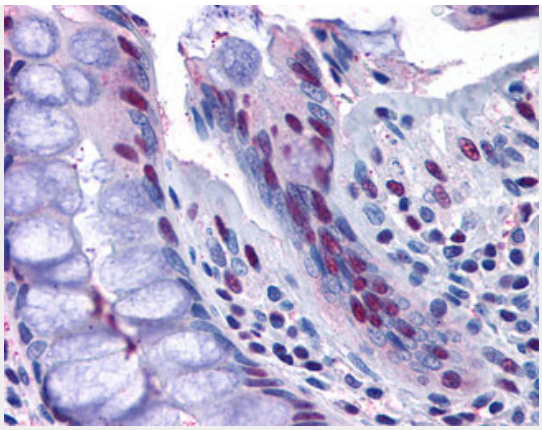
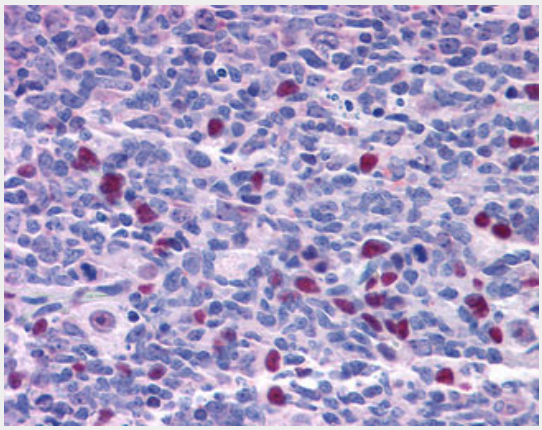


Anti-NAT10 antibody IHC of human colon.



Anti-NAT10 antibody IHC of human tonsil.

NAT10 Antibody (Internal) - 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 (Internal) - 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).