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

NAT8 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP4957c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9UHE5
Other Accession	Q9UHF3
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB25556
Calculated MW	25619
Antigen Region	110-138

Additional Information

Gene ID	9027
Other Names	N-acetyltransferase 8, 231-, Acetyltransferase 2, ATase2, Camello-like protein 1, Cysteinyl-conjugate N-acetyltransferase, CCNAT, NAT8 (HGNC:18069)
Target/Specificity	This NAT8 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 110-138 amino acids from the Central region of human NAT8.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	NAT8 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NAT8 (HGNC:18069)
Function	Endoplasmic reticulum (ER)-membrane-bound lysine N- acetyltransferase catalyzing the N6-acetylation of lysine residues in the lumen of the ER in various proteins, including PROM1 and BACE1, using acetyl-CoA as acetyl

donor (PubMed:19011241, PubMed:22267734, PubMed:24556617, PubMed:31945187). Thereby, may regulate apoptosis through the acetylation and the regulation of the expression of PROM1 (PubMed:24556617). May also regulate amyloid beta-peptide secretion through acetylation of BACE1 and the regulation of its expression in neurons (PubMed:19011241). N(6)-lysine acetylation in the ER maintains protein homeostasis and regulates reticulophagy (By similarity). Alternatively, acetylates the free alpha-amino group of cysteine S- conjugates to form mercapturic acids (PubMed:20392701). This is the final step in a major route for detoxification of a wide variety of reactive electrophiles which starts with their incorporation into glutathione S-conjugates. The glutathione S-conjugates are then further processed into cysteine S-conjugates and finally mercapturic acids which are water soluble and can be readily excreted in urine or bile.

Cellular Location

Endoplasmic reticulum-Golgi intermediate compartment membrane; Single-pass type II membrane protein. Endoplasmic reticulum membrane; Single-pass type II membrane protein

Tissue Location

Preferentially expressed in liver and kidney. Also detected in brain (at protein level).

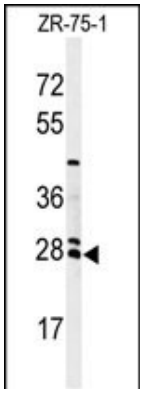
Background

This protein, isolated using the differential display method to detect tissue-specific genes, is specifically expressed in kidney and liver. The encoded protein shows amino acid sequence similarity to N-acetyltransferases. A similar protein in Xenopus affects cell adhesion and gastrulation movements, and may be localized in the secretory pathway. A highly similar paralog is found in a cluster with this gene.

References

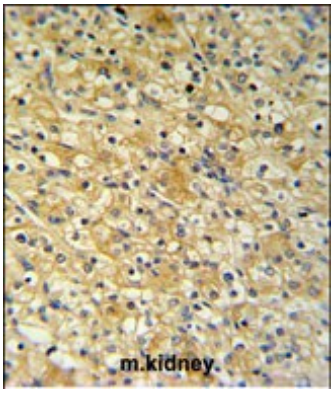
Ko, M.H., et al. J. Biol. Chem. 284(4):2482-2492(2009) Juhanson, P., et al. BMC Med. Genet. 9, 25 (2008) Barrios-Rodiles, M., et al. Science 307(5715):1621-1625(2005)

Images



Western blot analysis of NAT8 Antibody (Center) (Cat. #AP4957c) in ZR-75-1 cell line lysates (35ug/lane). NAT8 (arrow) was detected using the purified Pab.

NAT8 Antibody (Center) (Cat. #AP4957c) IHC analysis in formalin fixed and paraffin embedded mouse kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the NAT8 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Citations

- The endoplasmic reticulum-based acetyltransferases, ATase1 and ATase2, associate with the oligosaccharyltransferase to acetylate correctly folded polypeptides.
- Biochemical inhibition of the acetyltransferases ATase1 and ATase2 reduces β-secretase (BACE1) levels and Aβ generation.