

Datasheet for 600-101-114**APOLIPOPROTEIN C-III Antibody****Overview**

Description:	Anti-Apolipoprotein C-III (GOAT) Antibody - 600-101-114
Item No.:	600-101-114
Size:	1 mg
Applications:	IHC, IP, WB
Reactivity:	Human
Host Species:	Goat

Product Details

Background:	Anti Apolipoprotein C-III antibody recognizes the gene product of APOC. Apolipoprotein C-III is a protein component of very low density lipoprotein (VLDL). APOC3 inhibits lipoprotein lipase and hepatic lipase; it is thought to inhibit hepatic uptake of triglyceride-rich particles. The APOA1, APOC3 and APOA4 genes are closely linked in both rat and human genomes. The A-I and A-IV genes are transcribed from the same strand, while the A-1 and C-III genes are convergently transcribed. An increase in apoC-III levels induces the development of hypertriglyceridemia. This antibody is suitable for cardiovascular research.
Synonyms:	goat anti-Apolipoprotein C-III antibody, ApoC-III, Apo-CIII antibody, Apolipoprotein C3, Apolipoprotein C III antibody
Host Species:	Goat
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	APOC3
Reactivity:	Human
Immunogen Type:	Native Protein
Immunogen:	produced from apoLipoprotein Type C-III derived from human plasma

Purity/Specificity: This product has been prepared by immunoaffinity chromatography using immobilized antigens followed by extensive cross-adsorption against other apoLipoproteins and human serum proteins to remove any unwanted specificities. Typically less than 1% cross reactivity against other types of apoLipoprotein was detected by ELISA against purified standards. This antibody reacts with human apoLipoprotein C-III and has negligible cross-reactivity with Type A-I, A-II, B, C-I, C-II, E and J apoLipoproteins. Specific cross reaction of anti-apoLipoprotein antibodies with antigens from other species has not been determined. Non-specific cross reaction of anti-apoLipoprotein antibodies with other human serum proteins is negligible.

Relevant Links:

- [600-101-114 SDS](#)
- [UniProtKB - P02656](#)
- [NCBI - CAA25648.1](#)
- [GenelD - 345](#)

Application Details

Tested Applications:	IHC
Suggested Applications:	IP, WB (Based on references)
Application Note:	Anti-Apolipoprotein antibodies have been tested in immunohistochemistry and used for indirect trapping ELISA for quantitation of antigen in serum using a standard curve, immunoprecipitation, immunohistochemistry, and for western blotting for highly sensitive qualitative analysis. When performing immunoblotting assays - do not block with blotto. Blotto formulations tend to contain apoLipoprotein Type C-III and will neutralize antibody activity.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:10,000
IHC:	1:50 - 1:200
IP:	1:100
WB:	1:500 - 1:5,000

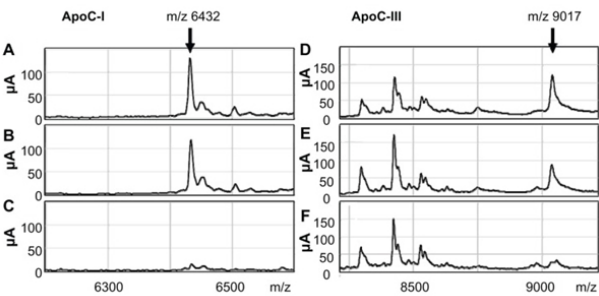
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.125 M Sodium Borate, 0.075 M Sodium Chloride, 0.005 M EDTA, pH 8.0
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at 4° C prior to opening. This product is stable 4° C as an undiluted liquid. Dilute only prior to immediate use. For extended storage mix with an equal volume of glycerol, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

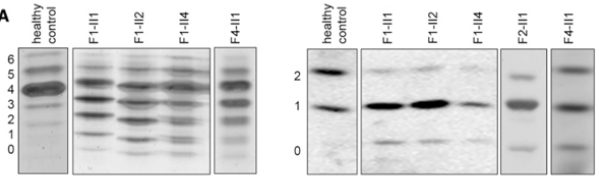


Immunoprecipitation

Changes in peak 2 (A–C) and peak 3 (D and E) by depletion of the identified proteins by immunoprecipitation. SELDI-TOF MS spectra of untreated samples (A and D) and samples immunoprecipitated with control IgG (B and E) are shown together with those of the samples immunoprecipitated with anti-apoC-I (C) or anti-apoC-III antibody (F).
Fig 5.
PMID: 23935359

Western Blot

(A) IEF of serum Tf (left) and serum ApoC-III (right) using anti-ApoC-III (at 1:2,000, p/n 600-101-114). For individual F2-II1, HPLC was used to assess Tf glycosylation status. Reference ranges and quantifications are shown in Tables S5 and S6.
Fig 2. PMID: 26833332

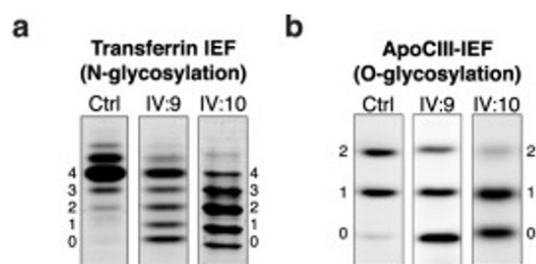




Western Blot

Identification of SLC10A7 as novel disease gene. (A) HCL within the ApoCIII-0 subgroup (Supplementary Material, Fig. S6) indicates four patients with similar glycomics signature, two of which with mutations in SLC10A7. Genetic studies uncover genetic deficiency of SLC10A7 in all patients. Figure 2.

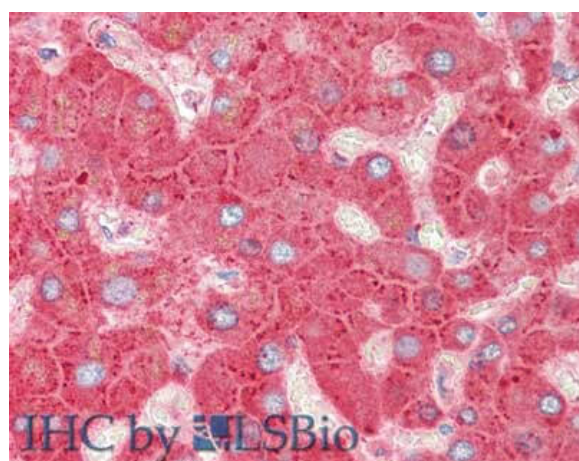
PMID: 29878199



Western Blot

a Glycosylation screening by isoelectric focusing (IEF) of serum transferrin. The accompanying numbers represent the total number of sialic acids in the different proteoforms. Both patients show a reduction in the number of sialic acids. Quantification of bands is shown in Supplementary Table 2. b Glycosylation screening by IEF of serum apolipoprotein C3 (ApoCIII) with anti-ApoCIII (1:2000, p/n 600-101-114). ApoCIII has one mucin-type O-linked glycan with one or two sialic acids in controls. Both patients show a reduction in the number of sialic acids. Quantification of bands is shown in Supplementary Table 2. Fig 2.

PMID: 34711829



Immunohistochemistry

Immunohistochemistry of goat anti-Apolipoprotein C-III antibody. Tissue: human liver. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: Apolipoprotein C-III at 2.5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase goat secondary antibody at 1:10,000 for 45 min at RT. Staining: Apolipoprotein C-III as precipitated red signal with hematoxylin purple nuclear counterstain.

References

- Linders, PTA et al. Congenital disorder of glycosylation caused by starting site-specific variant in syntaxin-5. *Nature Communications* (2021)
- Ashikov A et al. Integrating glycomics and genomics uncovers SLC10A7 as essential factor for bone mineralization by regulating post-Golgi protein transport and glycosylation. *Hum Mol Genet.* (2018)
- Jansen et al. CCDC115 Deficiency Causes a Disorder of Golgi Homeostasis with Abnormal Protein Glycosylation. *American Journal of Human Genetics* (2016)
- Takinami Y et al. Identification of potential prognostic markers for knee osteoarthritis by serum proteomic analysis. *BioMark Insights.* (2013)

Disclaimer

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