

PRODUCT INFORMATION



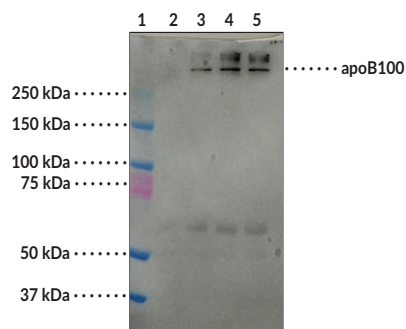
ApoB Polyclonal Antibody

Item No. 44650

Overview and Properties

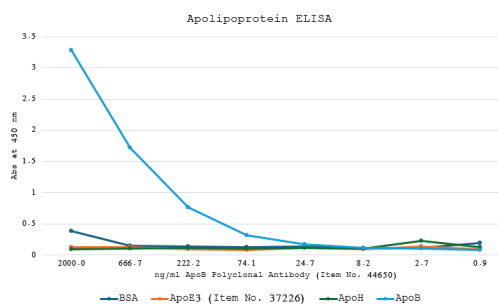
Contents: This vial contains 500 μ l of goat polyclonal antibody at 2 mg/ml.
Synonym: Apolipoprotein B
Immunogen: Purified human ApoB protein
Cross Reactivity: (+) ApoB, ApoB-48, ApoB-100
Species Reactivity: (+) Human; (-) Mouse
Uniprot No.: P04114
Form: Liquid
Storage: -20°C (as supplied)
Stability: \geq 3 years
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host: Goat
Applications: ELISA, Immunoprecipitation (IP), and Western blot (WB); the recommended starting dilution is 1:1,000 (2 μ g/ml) for ELISA and WB, and 1:1 (v/v) for IP of LDL from human plasma. Other applications were not tested; therefore, optimal working concentration/dilution should be determined empirically.

Images



Lane 1: MW Markers
Lane 2: Human plasma (1 μ g)
Lane 3: Human plasma (2 μ g)
Lane 4: Human plasma (3 μ g)
Lane 5: Human plasma (4 μ g)

SDS-PAGE Analysis of Human Plasma. Human plasma samples were reduced and loaded to 4-12% SDS-PAGE, followed by transfer to nitrocellulose and probing with the ApoB Polyclonal Antibody.



ELISA. Strips were coated with 1 μ g/ml protein and blocked with 1% BSA followed by probing with indicated amounts of ApoB Polyclonal Antibody (Item No. 44650).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/11/2026

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

ApoB is an amphiphilic lipid carrier protein required as the structural component for atherogenic lipoproteins.¹ It is expressed as two major forms: a truncated isoform, ApoB-48, which is expressed in the intestines, and full-length ApoB-100, which is expressed in the liver and to a lesser extent by cardiomyocytes.¹⁻³ ApoB-100 is composed of $\beta\alpha 1$, $\beta 1$, $\alpha 2$, $\beta 2$, and $\alpha 3$ domains where the β domains are involved in forming irreversible bonds to the lipid core and the α domains have reversible lipid affinity.² ApoB-48 is incorporated into chylomicrons and their remnants whereas ApoB-100 is incorporated into lipoproteins VLDLs, IDLs, and LDLs.¹ Uptake of ApoB-containing lipoproteins is primarily mediated *via* the LDL receptor (LDLR), heparin sulfate proteoglycans, and scavenger receptor BI (SR-BI). Transgenic mice expressing human *APOB* and *APOA* fed an atherogenic diet exhibit increased levels of VLDL- and LDL-cholesterol and increased aortic lesion areas compared with non-transgenic mice.⁴ Mutations in *APOB* are associated with autosomal dominant hypercholesterolemia and familial hypobetalipoproteinemia.^{5,6} Cayman's ApoB Polyclonal Antibody can be used for immunoprecipitation (IP) and Western blot (WB) applications.

References

1. Behbodikhah, J., Ahmed, S., Elyasi, A., *et al.* Apolipoprotein B and cardiovascular disease: Biomarker and potential therapeutic target. *Metabolites* **11(10)**, 690 (2021).
2. Segrest, J.P., Jones, M.K., De Loof, H., *et al.* Structure of apolipoprotein B-100 in low density lipoproteins. *J. Lipid. Res.* **42(9)**, 1346-1367 (2001).
3. Véniant, M.M., Kim, E., McCormick, S., *et al.* Insights into apolipoprotein B biology from transgenic and gene-targeted mice. *J. Nutr.* **129**, 451S-455S (1999).
4. Callow, M.J., Verstuyft, J., Tangirala, R., *et al.* Atherogenesis in transgenic mice with human apolipoprotein B and lipoprotein (a). *J. Clin. Invest.* **96(3)**, 1639-1649 (1995).
5. vanderGraaf, A., Avis, H.J., Kusters, D.M., *et al.* Molecular basis of autosomal dominant hypercholesterolemia: Assessment in a large cohort of hypercholesterolemic children. *Circulation* **123(11)**, 1167-1173 (2011).
6. Gangloff, A., Bergeron, J., Couture, P., *et al.* A novel mutation of apolipoprotein B in a French Canadian family with homozygous hypobetalipoproteinemia. *J. Clin. Lipidol.* **5(5)**, 414-417 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM