

Product Specification Sheet

**Human Apolipoprotein B (ApoE) Antibodies**

Cat. # APOB21-A	<b>Goat Anti-Human ApoB IgG</b>	<b>SIZE:</b> 100 ug
Cat. # APOB21-C	Purified Human ApoB protein Western Blot +ve control	<b>SIZE:</b> 100 ul
Cat. # APOB25-N-100	Purified Human ApoB protein	<b>SIZE:</b> 100 ug

Apolipoproteins are proteins that bind to fats (lipids). They form lipoproteins, which transport dietary fats through the bloodstream. Dietary fats are digested in the intestine and carried to the liver. Fats are also synthesized in the liver itself. Fats are stored in fat cells (adipocytes). Fats are metabolized as needed for energy in the skeletal muscle, heart, and other organs and are secreted in breast milk. Apolipoproteins also serve as enzyme co-factors, receptor ligands, and lipid transfer carriers that regulate the metabolism of lipoproteins and their uptake in tissues.

Apolipoprotein B (APOB) is the primary apolipoprotein of low-density lipoproteins (LDL or "bad cholesterol"), which is responsible for carrying cholesterol to tissues. While it is unclear exactly what functional role APOB plays in LDL, it is the primary apolipoprotein component and is absolutely required for its formation. What is clear is that the APOB on the LDL particle acts as a ligand for LDL receptors in various cells throughout the body (i.e. less formally, APOB "unlocks" the doors to cells and thereby delivers cholesterol to them). Through a mechanism that is not fully understood, high levels of APOB can lead to plaques that cause vascular disease (atherosclerosis), leading to heart disease. There is considerable evidence that levels of APOB are a better indicator of heart disease risk than total cholesterol or LDL. However, primarily for practical reasons, cholesterol, and more specifically, LDL-cholesterol, remains the primary lipid target and risk factor for atherosclerosis.

Apolipoprotein B is the dominant protein constituent of LDL. The concentration of Apo B in normal plasma is 90 mg per 100 ml. Two forms of Apo B exist: Apo B-100 and Apo B-48. The first is found in VLDL and LDL and is produced by the liver. The second is found in chylomicrons and originates in the intestine. Human ApoB (protein accession #PA04114; 4509 aa, chromosome 2).

**Source of Antigen, Antibodies, and positive controls**

**# Cat #APOB25-N-100**

Human ApoB (550 Kda) was Prepared from fresh, non-frozen plasma shown to be non reactive for HbsAG, anti-HCV, anti-HBc, and negative for anti-HIV 1 & 2 by FDA approved tests. It is >95% pure by SDS-PAGE. It is supplied at 1 mg/ml (see lot sp concn on the vial) in 10 mM Na deoxycholate, pH 10.0, with 50 mM Na<sub>2</sub>CO<sub>3</sub> and 50 mM NaCl or lyophilized in the same buffer. Reconstitute in water or other buffers at 1mg/ml and store at -20oC or below. Stability is ~1 year.

<b>Antigen</b>	Purified human ApoB protein
<b>Ab Host/type</b>	Goat, Polyclonal IgG # <b>APOB21-A</b>
<b>2-Ab</b>	<b>Rabbit Anti-goat IgG-HRP conjugate</b> Cat # 30220 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	# 20011-1, Goat (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Cat# APOB21-C**

For Western blot +ve control, purified human ApoB protein (Cat # APOB21-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of APOB21-C for good visibility with antibody Cat # APOB21-A. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the APOB21-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

**Form & Storage of Antibodies/Peptide Control**

**IgG (unpurified, undiluted)**  
100 ul/vial solution lyophilized powder  
contains 0.05% sodium azide  
**Reconstitute powder** 100 ul PBS

**Recommended Usage**

**Western Blotting** 1-3 ug/ml using Chemiluminescence technique). Human ApoB is approx. ~550 kDa (1).

**ELISA** (1:10K-1:100K; using 50-100 ng of control peptide/well).

**Histochemistry & Immunofluorescence: not tested.** We recommend a antibody testing at 5-20 ug/ml.

**Specificity & Cross-reactivity**

The APOB21-A reacts with human ApoB in ELISA and Western. Antibody crossreactivity in various species is not established. APOB211-C protein control should be used a positive control.

**General References:** Knott C (1986) Nucl. Acid Res. 14, 7501-7503; Law SW (1985) PNAS 82, 8340-8344; Hardman DA (1987) Biochem. 26, 5478-5486; Hospattankar AV (1987) BBRC 148, 279-285; Yang C-y (1986) Nature 323, 738-742; Knott TC (1986) Nature 323, 734-738;

\*This product is for In vitro research use only.

**Related material available from ADI**

Ant-ApoA, ApoB, ApoC, ApoE -Beta amyloid 1-40, 1-42, APP, Parkin, Synucleins (α, β, γ), Presenilins 1, 2, ERAB

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