

Apolipoprotein D Human, Sheep Polyclonal Antibody

Product Data Sheet

Source of Antigen: *E. coli*

Host: Sheep

Cat. No.:

RD184118100

(0.1 mg)

Other names: Apo D

Research topic

Energy metabolism and body weight regulation, Lipoprotein metabolism

Preparation

The antibody was raised in sheep by immunization with the recombinant Human Apolipoprotein D.

Amino Acid Sequence

The immunization antigen (19.82 kDa - calculated) is a protein containing 174 AA of recombinant Human Apolipoprotein D. C-terminal His-tag, 7 extra AA (highlighted).

The amino acid sequence of this product corresponds to the UniProtKB/Swiss-Prot entry P05090 (Human ApoD). Following modifications were made: Four amino acid exchanges were introduced at the surface of ApoD (Trp99His, Cys116Ser, Ile118Ser, Leu120Ser) to enhance the solubility of the recombinant protein and another three (Leu23Pro, Pro133Val, Asn134Ala) to facilitate its genetic manipulation (highlighted).

FHLGKCPNPP VQENFDVNKY PGRWYEIEKI PTTFENGRCI QANYSLMENG KIKVLNQELR ADGTVNQIEG EATPVNLTPE
AKLEVKFSWF MPSAPYHILA TDYENYALVY SCTSISQSFH VDFAWILARN VALPPETVDS LKNILTSNNI DVKKMTVTDQ
VNCPKLSAHH HHHH

Species Reactivity

Human

Not yet tested in other species.

Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Human Apolipoprotein D.

Antibody Content

0.1 mg (determined by BCA method, BSA was used as a standard)

Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE.**

Reconstitution

Add 0.2 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

Expiration

See vial label.

Lot Number

See vial label.

Quality Control Test

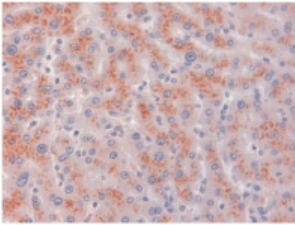
Indirect ELISA - to determine titer of the antibody

SDS PAGE - to determine purity of the antibody

Applications

ELISA, Immunohistochemistry, Western blotting

Antibodies application



Immunohistochemical staining of formalin-fixed paraffin-embedded human liver using RD184118100 (Apolipoprotein D Human, Sheep polyclonal antibody) at concentration of 2 µg/ml (original magnification, 40x). Detection DAB. Staining in secretory vesicles of hepatocytes.

Introduction to the Molecule

Human ApoD is a glycoprotein of 169 amino acids, which was discovered in plasma as an atypical lipoprotein. There, ApoD is peripherally associated with HDL via disulfide bond with ApoA-II, which itself forms an amphipathic α -helical belt that wraps around the lipid disc.

ApoD was also isolated as a progesterone-binding protein abundant in mammary gross cystic disease fluid and it was found as a monomeric protein in apocrine secretion, where it seems to bind odorants. ApoD mRNA is expressed in a variety of organs as well as in certain human cancers. Indeed, ApoD has received attention as prognostic marker for various, often steroid-responsive tumors, including prostate cancer, breast carcinoma, and cutaneous malignant melanoma. In addition, ApoD is synthesized by astrocytes in the central nervous system and there it seems to be involved in arachidonic acid transport, metabolism, and signaling. Notably, ApoD plays a well documented pathophysiological role in several psychiatric disorders, especially in schizophrenia.

Note

This product is for research use only.

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