Apolipoprotein D Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Apo-D

Cat. No.:
RD172118100 (0.1 mg)

Description

Total 174 AA, MW: 19.82 kDa (calculated). C-terminal His-tag, 7 extra AA (highlighted). E280 = 26150 M-1cm-1.
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).

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 a-helical belt that wraps around the lipid disc .
ApoD was also isolated as a progesteronebinding 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 systém 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.

Research topic

Energy metabolism and body weight regulation, Lipoprotein metabolism

Amino Acid Sequence

FHLGKCPNPP VQENFDVNKY **P**GRWYEIEKI PTTFENGRCI QANYSLMENG KIKVLNQELR ADGTVNQIEG EATPVNLTEP
AKLEVKFSWF MPSAPY**H**ILA TDYENYALVY SCT**S**I**S**Q**S**FH VDFAWILARN **VA**LPPETVDS LKNILTSNNI DVKKMTVTDQ
VNCPKLS**AHH HHHH**

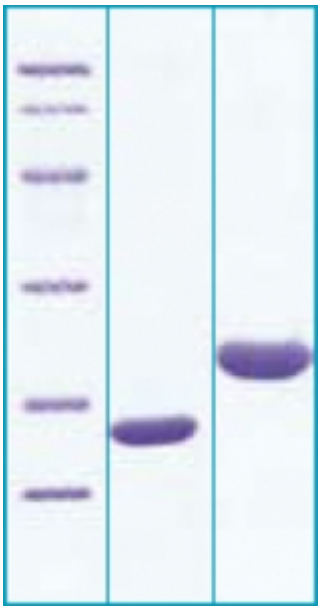
Source

E. coli

Purity

>95%

SDS-PAGE gel



12% SDS-PAGE separation of Human ApoD
1. MW marker - 97, 66, 45, 31, 21, 14 kDa
2. non reduced and non boiled sample, 5 µg / lane
3. reduced and boiled sample, 5 µg / lane

Endotoxin

<1.0 EU/µg

Formulation

Filtered (0.4 µm) and lyophilized from 1.0 mg/mL in 4 mM KH2PO4; 16 mM Na2HPO4; 115 mM NaCl; pH 7.5

Reconstitution

Add deionized water to a working concentration approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely.
Product is not sterile! Please filter this product by an appropriate sterile filter before using it in the cell culture.

Shipping

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

Storage, Stability/Shelf Life

Store lyophilized protein at ?20°C. Lyophilized protein remains stable until the expiry date when stored at ?20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

Quality Control Test

BCA to determine content of the protein
SDS-PAGE to determine purity of the protein
LAL TEST to determine quantity of the endotoxin.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.

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