



Product Datasheet

Product Name	Recombinant Human Apolipoprotein-D
Cata No	CB501281
Source	<i>Escherichia Coli.</i>
Synonyms	Apolipoprotein D, Apo-D, ApoD.

Description

Apolipoprotein-D is mainly associated with high density lipoproteins in human plasma.

Apolipoprotein-D is an atypical apolipoprotein and, based on its primary structure, Apolipoprotein-D is a member of the lipocalin family. Lipocalins adopt a beta-barrel tertiary structure and transport small hydrophobic ligands. Apolipoprotein-D binds cholesterol, progesterone, pregnenolone, bilirubin and arachidonic acid.

Apolipoprotein-D is expressed in numerous tissues having high levels of expression in spleen, testes and brain. Apolipoprotein-D is present at high concentrations in the cyst fluid of women with gross cystic disease of the breast, a condition associated with increased risk of breast cancer.

Apolipoprotein-D accumulates in regenerating peripheral nerves and in the cerebrospinal fluid of patients with neurodegenerative conditions, such as Alzheimer's disease. Apolipoprotein-D participates in maintenance and repair within the central and peripheral nervous systems. Apolipoprotein-D is a multi-ligand, multi-functional transporter and transports a ligand from 1 cell to another within an organ, scavenges a ligand within an organ for transport to the blood or could transport a ligand from the circulation to specific cells within a tissue.

Apolipoprotein-D Human Recombinant His Tag fusion protein at C-terminus (7 highlighted a.a.) produced in E.Coli is a single, non-glycosylated, Polypeptide

chain containing 174 amino acids and having a molecular mass of 19.8 kDa.

The protein a.a.sequence corresponds to the UniProtKB/Swiss-Prot entry P05090.

The following gene modifications were made: Trp99His, Cys116Ser, Ile118Ser, Leu120Ser amino acids exchanges were introduced at the surface of Apolipoprotein-D to enhance the protein's solubility and another three Leu23Pro, Pro133Val, Asn134Ala amino acids exchanges which facilitate its genetic manipulation. The Apolipoprotein-D is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

Greater than 95% as determined by SDS-PAGE.

Formulation

Lyophilized from 1mg/ml in 4mM KH_2PO_4 , 16mM Na_2HPO_4 and 115mM NaCl pH7.5.

Reconstitution

Add deionized H_2O to a working volume of 0.5mg/ml and let the lyophilized pellet dissolve completely.

Stability

Store lyophilized protein at -20°C . Aliquot the product after reconstitution to **avoid repeated**

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freezing/thawing cycles. 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. The lyophilized protein remains stable until the expiry date when stored at -20°C.

Sequence

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FHLGKCPNPP VQENFDVNKY PGRWYEIEKI
PTTFENGRCI QANYSLMENG KIKVLNQELR
ADGTVNQIEG EATPVNLTEP AKLEVKFSWF
MPSAPYHILA TDYENYALVY SCTSISQSFH
VDFAWILARN VALPPETVDS LKNILTSNNI
DVKKMTVTDQ VNCPKLSAHHHHHH

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