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## Produktinformation



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Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## Apolipoprotein D, His Tag, human recombinant (rHuApo-D-His)

**Catalog No:** 69741  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Apolipoprotein D, Apo-D, ApoD

### Background

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.

### Description

Apolipoprotein-D human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 174 amino acids with a C-terminal His Tag and having a molecular mass of 19.82 kDa. The amino acid sequence corresponds to the UniProtKB/Swiss-Prot entry P05090. The following gene modifications were made: Trp99His, Cys116Ser, Ile118Ser, Leu120Ser amino acid exchanges were introduced at the surface of Apolipoprotein-D to enhance the protein's solubility and another three Leu23Pro, Pro133Val, Asn134Ala amino acid exchanges which facilitate its genetic manipulation. Apolipoprotein-D is purified by proprietary chromatographic techniques.

### Physical Appearance

Filtered white lyophilized (freeze-dried) powder.

### Formulation

Filtered (0.4 µm) and lyophilized from 1 mg/ml in 4 mM KH<sub>2</sub>PO<sub>4</sub>, 16 mM Na<sub>2</sub>HPO<sub>4</sub> and 115 mM NaCl pH 7.5.

### Solubility

It is recommended to add deionized H<sub>2</sub>O to a working volume of 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.

### Stability

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

### Purity

Greater than 95% as determined by SDS-PAGE.



### Amino Acid Sequence

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

### Usage

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