

## 32-1054: APOD Recombinant Protein

**Alternative Name :** Apolipoprotein D,Apo-D,ApoD.

### Description

Source : Escherichia Coli. 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 19.82kDa. 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. 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, scavenge a ligand within an organ for transport to the blood or could transport a ligand from the circulation to specific cells within a tissue.

### Product Info

<b>Amount :</b>	10 µg
<b>Purification :</b>	Greater than 95% as determined by SDS-PAGE.
<b>Content :</b>	Filtered (0.4µm) and lyophilized from 1mg/ml in 4mM KH <sub>2</sub> PO <sub>4</sub> , 16mM Na <sub>2</sub> HPO <sub>4</sub> and 115mM NaCl pH 7.5.
<b>Storage condition :</b>	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.
<b>Amino Acid :</b>	FHLGKCPNPP VQENFDVNKY PGRWYEIEKI PTFENGRCI QANYSLMENG KIKVLNQELR ADGTVNQIEG EATPVNLTEP AKLEVKFSWF MPSAPYHILA TDYENYALVY SCTSISQSFH VDFAWILARN VALPPETVDS LKNILTSNNI DVKKMTVTDQ VNCPKLSAHHHHHH.

### Application Note

It is recommended to add deionized H<sub>2</sub>O to a working volume of 0.5mg/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.

