

# Recombinant Human Apolipoprotein E4 (ApoE4)

## Recombinant Protein

### Product Information

**Product No.:** A219

**Storage:** -20°C

## Product Description

### Background:

Apolipoprotein E (ApoE) produced by the liver and circulating macrophages, that is a constituent of every plasma lipoprotein except the smallest low density lipoproteins (LDL). It is a key player in the recycling and redistribution of lipids and cholesterol. ApoE is a ligand with a high affinity for low density lipoprotein receptors (LDLR). It regulates the activity of enzymes that metabolize lipids and also makes lipids soluble. Mice and humans that lack ApoE cannot remove excess lipoproteins from the plasma and have an increased risk of atherosclerosis. Defective binding of ApoE to its receptors will lead to accumulation of cholesterol-rich lipoprotein particles in the plasma; this is the cause of type III hyperlipoproteinemia. There are three main isoforms of ApoE all products of alleles at a single gene locus: E2 (Cys112, Cys158), E3 (C112, Arg158), and E4 (Arg112, Arg158). Inheritance of ApoE4 has been associated with earlier onset of Alzheimer's disease, Parkinson's disease and increased likelihood of dementia.

### Known Reactivity Species:

Human

### Expression Host:

E. coli Cells

### Formulation

The protein was 0.2 µm filtered and lyophilized from 20 Mm Sodium Phosphate, pH 7.8

### Purity

>90% by SDS Page and HPLC

### Endotoxin

<1.0 EU/µg as determined by the LAL method

### Storage and Stability

The lyophilized protein should be stored desiccated at -20°C. The reconstituted protein can be store at 2-8°C for 1 week. For long-term storage of the reconstituted protein add a carrier protein such as 0.1% BSA, aliquot into working volumes and store at -20°C for up to 3 months in a manual defrost freezer.

### Avoid Repeated Freeze Thaw Cycles.

### Country of Origin

USA

### References

- 1) Yang, Hong *et al.* PLoS One. 2012;7(9):e44430. 2012 Sep 11 [PubMed](#)