Leinco Technologies, Inc.
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Recombinant Mouse ApoE — Purified No Carrier Protein

Recombinant Protein

Product Information

Product No.: A540

Product Description

Background:
Apolipoprotein (APO) E is a sialylated glycoprotein[1] that functions in lipid metabolism, neurobiology, and neurodegenerative diseases[2] by playing an important role in plasma cholesterol metabolism[3]. Functional roles of APOE include lipoprotein production, conversion, clearance, and transport between organs via plasma and interstitial fluids[1].

As a core component of plasma lipoproteins, APOE interacts with both the lipoprotein particle core as well as the plasma aqueous environment[1]. APOE binds to many molecules including high-density lipoproteins (HDL), chylomicrons, chylomicron remnants, very low density lipoproteins (VLDL), intermediate density lipoproteins (IDL), and receptors such as LDL receptor/LDLR and very low-density lipoprotein receptor/VLDLR. APOE also binds heparan- sulfate proteoglycans on cell surfaces.

APOE is synthesized in mouse peritoneal macrophages[3], mid-gestation mouse embryos, visceral yolk sacs as well as virtually all adult peripheral tissue in rodents[4] and is secreted into the extracellular space and matrix[1]. APOE knockout mice display severe hypercholesterolemia, have impaired clearance of dietary fats, and are prone to atherosclerosis. The mouse APOE homolog was isolated from a genomic library[3] and is located on chromosome 7[1]. Unlike human APOE, which has three major alleles (ε2, ε3, and ε4), with ε4 implicated in risk of Alzheimer's Disease and ε2 implicated in protection[5], APOE expression in mouse is constrained to a single allele[1].

Known Reactivity Species:
Mouse

Expression Host:
E. coli Cells

Format:
Purified No Carrier Protein

Storage and Stability

This lyophilized protein is stable for twelve months when stored at -20°C to -80°C. After aseptic reconstitution, this protein may be stored for one month at 2°C to 8°C or for three months at -20°C to -80°C in a manual defrost freezer. **Avoid Repeated Freeze Thaw Cycles.**

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Applications

Applications and Recommended Usage (Quality Tested By Leinco):

SDS-Page,
WB,
ELISA,
Functional Assay

Other Applications Reported in Literature:

TBD

Country of Origin

USA

References

1. https://www.uniprot.org/uniprotkb/P08226/entry
2. Huang Y, Mahley RW. Neurobiol Dis. 72 Pt A:3-12. 2014.
3. Horiuchi K, Tajima S, Menju M, et al. J Biochem. 106(1):98-103. 1989.
4. Basheeruddin K, Stein P, Strickland S, et al. Proc Natl Acad Sci U S A. 84(3):709-713. 1987.
5. Serrano-Pozo A, Das S, Hyman BT. Lancet Neurol. 20(1):68-80. 2021.