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Human ApoE4 Antibody

Purified No Carrier Protein

Hybridoma Monoclonal Antibody

Product Information

Product No.: A442

Clone: 4E4

Isotype: Mouse IgG1 κ

Storage: Sterile 2° to 8°C

Product Description

Specificity:
4E4 activity is specific to ApoE4, recognizing an internal domain present exclusively in the ApoE4 isoform.

Antigen Distribution:
ApoE is produced differentially in the central nervous system by astrocytes and microglia as well as peripherally by the liver and macrophages. ApoE does not cross the blood–brain barrier.

Background:
Apolipoprotein E (ApoE) is a glycoprotein involved in lipid metabolism encoded by three isoforms, ApoE2, ApoE3, and ApoE4, which differ at residues 112 and 158 (E2: C112, C158; E3: C112, R158; E4: R112, R158)[1]. Carriers of the ApoE4 isoform are more likely to develop Alzheimer's Disease (AD), with cognitive changes also occurring earlier[2]. ApoE4 has been implicated in increased amyloid β deposition, a key marker of AD, and has an effect on lipid metabolism, inflammation, phosphorylation of tau protein, and mitochondrial function. ApoE4 is also a risk factor for cerebral amyloid angiopathy, dementia with Lewy bodies, tauopathy, cerebrovascular disease, multiple sclerosis, vascular dementia, and is related to poor outcome following head injury. In contrast, ApoE4 is protective for age-related macular degeneration. Lower concentrations of ApoE are found in ApoE4 carriers. However, it is unknown how the amount of ApoE4 present intersects with its functional activity to increase risk of disease. Anti-ApoE4 therapies that aim to mitigate the pathological effects of ApoE4 and inhibit amyloid accumulation are under study.

Known Reactivity Species:
Human

Format:
Purified No Carrier Protein

Immunogen:
Synthetic peptide made to an internal region of human ApoE4

Formulation
This purified antibody is formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.4, 1% BSA and 0.09% sodium azide as a preservative.

Purity
≥90% monomer by analytical SEC and SDS-Page

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Storage and Stability
This purified antibody is stable when stored at 2° to 8°C

Do not freeze.

Other Applications Reported in Literature:
ELISA,
IHC,
IP,
WB,
IF

Country of Origin
USA

References
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