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Product Information

Anti-ApoER2

produced in rabbit, affinity isolated antibody

Catalog Number **A3481**

Product Description

Anti-ApoER2 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 928-945 located near the C-terminus of human ApoER2 (Gene ID: 7804), conjugated to KLH. This sequence is identical in mouse ApoER2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-ApoER2 recognizes human ApoER2 by immunoblotting (~105 kDa). Staining of the ApoER2 band in immunoblotting is specifically inhibited by the ApoER2 immunizing peptide.

Apolipoprotein E receptor 2 (ApoER2, also known as LRP8) belongs to the family of low density lipoprotein (LDL) receptors that includes the LDL receptor (LDLR), the LDL receptor-related proteins (LRPs) and the very low density lipoprotein receptor (VLDLR).¹⁻³ These receptors play an important role in the endocytosis of plasma lipoproteins, including ApoE, and cholesterol metabolism. In the central nervous system, ApoER2 mediates various neuronal signaling mechanisms during neuronal development, affecting neurite outgrowth, synapse formation and neuronal migration, and neuronal survival in response to acute damage.³⁻⁵ ApoE gene is considered a major risk factor in several neurodegenerative diseases, including late-onset Alzheimer's disease, suggesting that ApoER2 plays a major role in the disease process. ApoER2 is expressed in multiple isoforms arising from alternative splicing. It is expressed predominantly in the brain and placenta. ApoER2 plays a central role in the reelin/Dab-1 signaling pathway that controls neuronal positioning during brain development as well as long-term potentiation (LTP) in the adult brain. Reelin binding to ApoER2 and VLDLR, results in the recruitment of the adaptor protein Dab-1 to initiate multiple signaling cascades that includes Src-family kinases and Akt, activation of ERK pathway and inhibition of JNK pathway.^{6, 7} ApoER2 interacts with the NMDA receptor, affecting Ca²⁺ influx and activation of ERK.⁸

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~2 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1 µg/mL is recommended using HEK-293T cells expressing human ApoER2.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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