

ApoE (pan) (D719N) Rabbit mAb



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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W, IP, IHC-P Endogenous	Species Cross-Reactivity* H	Molecular Wt. 35 kDa	Isotype Rabbit IgG**
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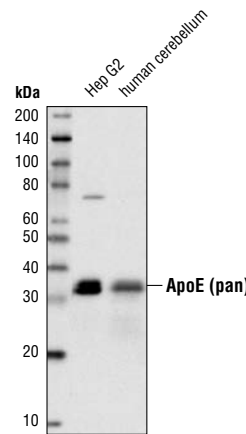
Background: Apolipoproteins are plasma lipoproteins that function as transporters of lipids and cholesterol in the circulatory system. Chylomicrons are a fundamental class of apolipoproteins containing very low-density lipoproteins (VLDL), intermediate-density lipoproteins (IDL), low-density lipoproteins (LDL), and high-density lipoproteins (HDL) (1,2).

Human ApoE has three isoforms: ApoE2, ApoE3, and ApoE4. These three isoforms differ in the combination of cysteine and arginine residues located at positions 130 and 176. The ApoE4 isoform contains arginine at both locations. Research studies have linked ApoE4 function to neuronal plasticity, synaptogenesis, and neurodegenerative diseases (3). ApoE4 is produced in the liver and brain, although it is widely expressed in other tissues, such as the lung, spleen, and ovary. Investigators have established the ApoE4 allele as a genetic risk factor for Alzheimer's disease (AD), accounting for 50-60% of the genetic variation in the disease (4). Research studies indicate that patients expressing ApoE4 have a reduced capacity for synaptic plasticity, an earlier age of onset of AD, and an increase in amyloid-beta (Aβ) deposition. The increase in Aβ suggests a role for ApoE4 in the impairment of amyloid clearance (5).

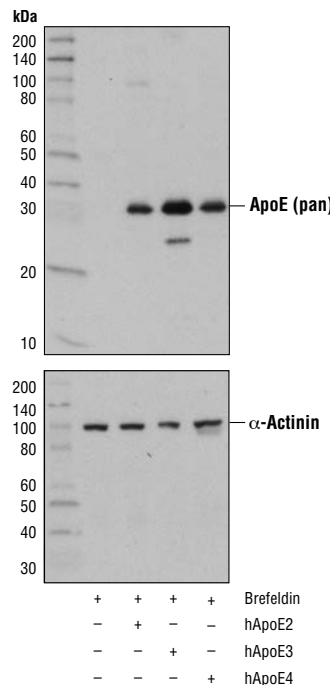
Specificity/Sensitivity: ApoE (pan) (D719N) Rabbit mAb recognizes endogenous levels of total ApoE protein. This antibody also recognizes overexpressed ApoE2, ApoE3 and ApoE4 proteins.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro285 of human ApoE protein.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.



Western blot analysis of cell extracts from Hep G2 cells treated with Brefeldin A #9972 (10 ng/ml, 90 min) and human cerebellum using ApoE (pan) (D719N) Rabbit mAb.



Entrez Gene ID #348
UniProt ID #P02649

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:50
Immunohistochemistry (Paraffin) 1:250-1:1000
Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.
Unmasking buffer: Citrate
Antibody diluent: SignalStain® Antibody Diluent #8112
Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114

For product specific protocols please see the web page for this product at www.cellsignal.com.

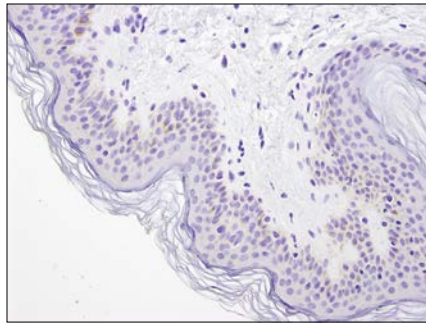
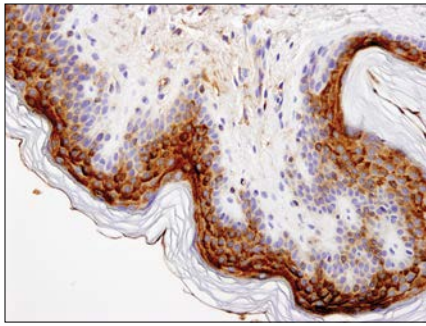
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

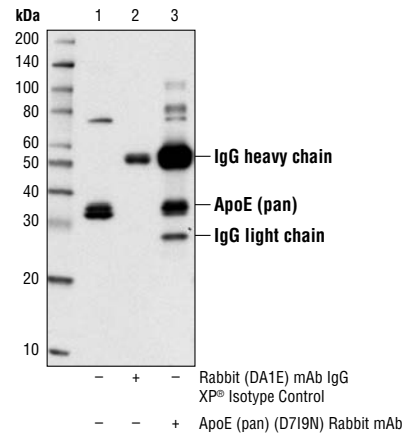
- (1) Kwitterovich, P.O. (2000) *Am J Cardiol* 86, 5L-10L.
- (2) Hussain, M.M. (2000) *Atherosclerosis* 148, 1-15.
- (3) Raber, J. et al. *Neurobiol Aging* 25, 641-50.
- (4) Corder, E.H. et al. (1993) *Science* 261, 921-3.
- (5) Holtzman, D.M. et al. (2000) *Proc Natl Acad Sci USA* 97, 2892-7.

◀ Western blot analysis of cell extracts from 293T cells, treated with Brefeldin A #9972 (10ng/ml, 90min), mock transfected or transfected with a construct expressing full-length human ApoE2 (hApoE2; +), ApoE3 (hApoE3; +), or ApoE4 (hApoE4; +), using ApoE (pan) (D719N) Rabbit mAb (upper) or α-Actinin (D6F6) XP® Rabbit mAb #6487 (lower).

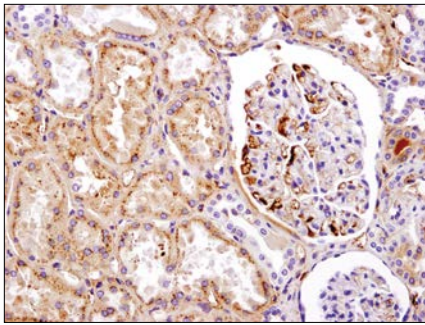
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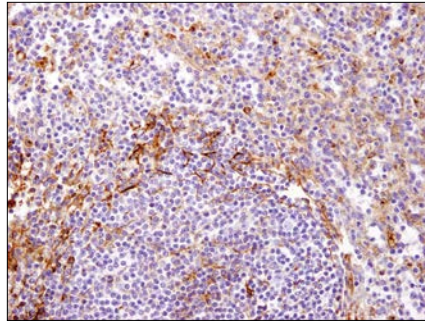
Immunohistochemical analysis of paraffin-embedded human skin using ApoE (pan) (D719N) Rabbit mAb in the presence of control peptide (left) and antigen-specific peptide (right).



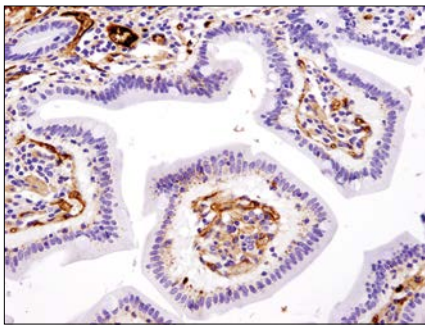
Immunoprecipitation of ApoE from Hep G2 cells treated with Brefeldin A #9972 (10 ng/ml, 90 min), using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or ApoE (pan) (D719N) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using ApoE (pan) (D719N) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human kidney using ApoE (pan) (D719N) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human spleen using ApoE (pan) (D719N) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human small intestine using ApoE (pan) (D719N) Rabbit mAb.