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HMGCR Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6577c

Product Information

Application	WB, IHC-P, E
Primary Accession	P04035
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19370
Calculated MW	97476
Antigen Region	380-410

Additional Information

Gene ID	3156
Other Names	3-hydroxy-3-methylglutaryl-coenzyme A reductase, HMG-CoA reductase, HMGCR
Target/Specificity	This HMGCR antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 380~410 amino acids from the Center region of human HMGCR.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HMGCR Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HMGCR (HGNC:5006)
Function	Catalyzes the conversion of (3S)-hydroxy-3-methylglutaryl-CoA (HMG-CoA) to mevalonic acid, the rate-limiting step in the synthesis of cholesterol and other isoprenoids, thus plays a critical role in cellular cholesterol homeostasis

(PubMed:21357570, PubMed:2991281, PubMed:36745799, PubMed:6995544). HMGCR is the main target of statins, a class of cholesterol-lowering drugs (PubMed:11349148, PubMed:18540668, PubMed:36745799).

Cellular Location

Endoplasmic reticulum membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P00347}. Peroxisome membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P00347}

Tissue Location

[Isoform 1]: Ubiquitously expressed with the highest levels in the cerebellum, fetal brain, testis, skin and adrenal gland. [Isoform 3]: Low abundance except in skin, esophagus, and uterine cervix.

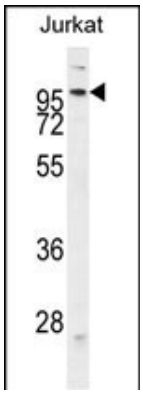
Background

HMG-CoA reductase is the rate-limiting enzyme for cholesterol synthesis and is regulated via a negative feedback mechanism mediated by sterols and non-sterol metabolites derived from mevalonate, the product of the reaction catalyzed by reductase. Normally in mammalian cells this enzyme is suppressed by cholesterol derived from the internalization and degradation of low density lipoprotein (LDL) via the LDL receptor. Competitive inhibitors of the reductase induce the expression of LDL receptors in the liver, which in turn increases the catabolism of plasma LDL and lowers the plasma concentration of cholesterol, an important determinant of atherosclerosis.

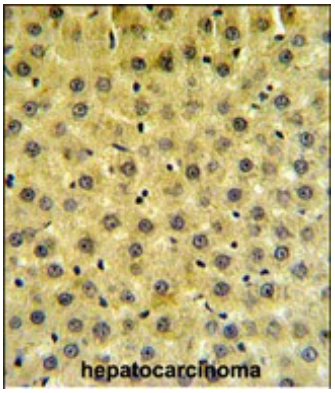
References

Chen,Y.C., Lipids 44 (8), 733-743 (2009)

Images



Western blot analysis of HMGCR antibody (Center) (Cat. #AP6577c) in Jurkat cell line lysates (35ug/lane). HMGCR (arrow) was detected using the purified Pab.



HMGCR Antibody (Center) (Cat. #AP6577c) IHC analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the HMGCR Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- MicroRNA-185-5p mediates regulation of SREBP2 expression by hepatitis C virus core protein.
- Cross-talk between TLR4-MyD88-NF-κB and SCAP-SREBP2 pathways mediates macrophage foam cell formation.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.