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FDFT1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2417B

Product Information

Application	WB, IHC-P, E
Primary Accession	P37268
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	48115
Antigen Region	140-170

Additional Information

Gene ID	2222
Other Names	Squalene synthase, SQS, SS, FPP:FPP farnesyltransferase, Farnesyl-diphosphate farnesyltransferase, FDFT1
Target/Specificity	This FDFT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 140-170 amino acids from the Central region of human FDFT1.
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	FDFT1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FDFT1
Function	Catalyzes the condensation of 2 farnesyl pyrophosphate (FPP) moieties to form squalene. Proceeds in two distinct steps. In the first half-reaction, two molecules of FPP react to form the stable presqualene diphosphate intermediate (PSQPP), with concomitant release of a proton and a molecule of inorganic diphosphate. In the second half-reaction, PSQPP undergoes

	heterolysis, isomerization, and reduction with NADPH or NADH to form squalene. It is the first committed enzyme of the sterol biosynthesis pathway.
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q02769}; Multi-pass membrane protein
Tissue Location	Widely expressed..

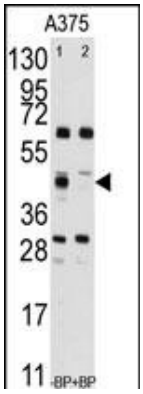
Background

FDFT1 catalyzes the first step in the cholesterol biosynthetic pathway, the conversion of trans-farnesyldiphosphate to squalene. The loss of promoter activity and response to sterols for FDFT1 is localized to a 69-bp section positioned 131 bp 5-prime to the transcription start site. Sequence analysis of this region shows that it contains a sterol regulatory element-1 (SRE1) previously identified in other sterol regulated genes and 2 putative NF1 binding sites.

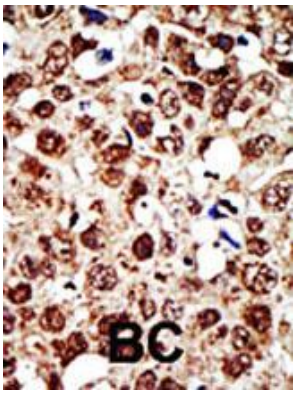
References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Soltis, D.A., et al., Arch. Biochem. Biophys. 316(2):713-723 (1995).
Jiang, G., et al., J. Biol. Chem. 268(17):12818-12824 (1993).
Robinson, G.W., et al., Mol. Cell. Biol. 13(5):2706-2717 (1993).
Summers, C., et al., Gene 136 (1-2Che), 185-192 (1993).

Images

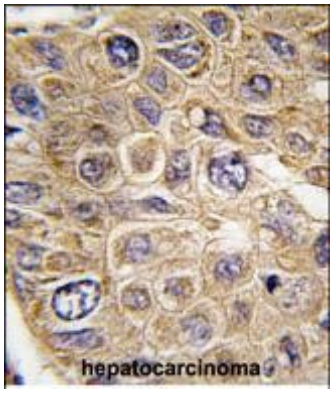


Western blot analysis of anti-FDFT1 Antibody (Center) (Cat.#AP2417b) pre-incubated without(lane 1) and with(lane 2) blocking peptide (BP2417b) in A375 cell line lysate. FDFT1(arrow) was detected using the purified Pab.

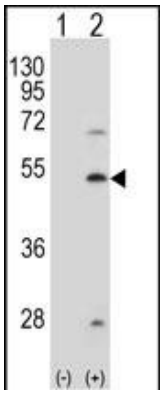


Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with FDFT1 Antibody (Center) (Cat.#AP2417b), which was peroxidase-conjugated to the secondary antibody,



followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Western blot analysis of FDFT1 (arrow) using rabbit polyclonal FDFT1 Antibody (A155) (Cat.#AP2417b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the FDFT1 gene.

Citations

- 5-Aza-2\'-deoxycytidine induced growth inhibition of leukemia cells through modulating endogenous cholesterol biosynthesis.
- Proteomic analysis of doxorubicin-induced changes in the proteome of HepG2cells combining 2-D DIGE and LC-MS/MS approaches.
- Docosahexaenoic acid activates some SREBP-2 targets independent of cholesterol and ER stress in SW620 colon cancer cells.