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FDPS Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2418A

Product Information

Application	IHC-P, WB, IF, E
Primary Accession	P14324
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4783/4784
Calculated MW	48275
Antigen Region	82-112

Additional Information

Gene ID	2224
Other Names	Farnesyl pyrophosphate synthase, FPP synthase, FPS, (2E, 6E)-farnesyl diphosphate synthase, Dimethylallyltranstransferase, Farnesyl diphosphate synthase, Geranyltranstransferase, FDPS, FPS, KIAA1293
Target/Specificity	This FDPS antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 82-112 amino acids from the N-terminal region of human FDPS.
Dilution	IHC-P~~1:100~500 WB~~1:1000 IF~~1:100 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	FDPS Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FDPS (HGNC:3631)
Synonyms	FPS, KIAA1293

Function	Key enzyme in isoprenoid biosynthesis which catalyzes the formation of farnesyl diphosphate (FPP), a precursor for several classes of essential metabolites including sterols, dolichols, carotenoids, and ubiquinones. FPP also serves as substrate for protein farnesylation and geranylgeranylation. Catalyzes the sequential condensation of isopentenyl pyrophosphate with the allylic pyrophosphates, dimethylallyl pyrophosphate, and then with the resultant geranylpyrophosphate to the ultimate product farnesyl pyrophosphate.
Cellular Location	Cytoplasm.

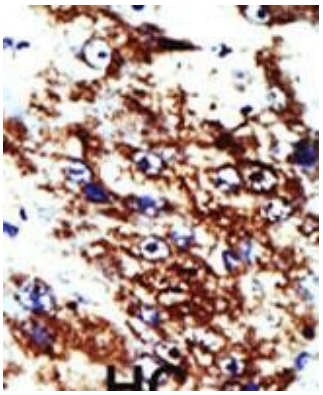
Background

The isoprene biosynthetic pathway supply the cell with cholesterol, ubiquinone, and various nonsterol metabolites. The farnesylpyrophosphate synthetase enzyme catalyzes the formation of geranyl and farnesylpyrophosphate from isopentenylpyrophosphate and dimethylallyl pyrophosphate. Analysis of FDPS activity and protein in rat liver, accompanied by immunofluorescence and immunoelectron microscopy studies, demonstrated that FDPS is predominantly localized in peroxisomes.1 Liver tissue from patients with the peroxisomal deficiency diseases Zellweger syndrome and neonatal adrenoleukodystrophy exhibit diminished activities of FDPS and subsequent isoprenoid synthesis.

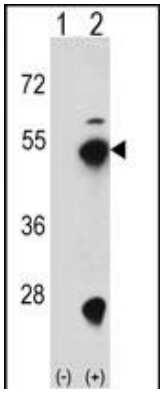
References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Nomura, N., et al., DNA Res. 1(1):27-35 (1994).
Wilkin, D.J., et al., J. Biol. Chem. 265(8):4607-4614 (1990).
Sheares, B.T., et al., Biochemistry 28(20):8129-8135 (1989).

Images



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.



Western blot analysis of FDPS (arrow) using rabbit polyclonal FDPS Antibody (D31) (Cat. #AP2418a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the FDPS gene.