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FDPS Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2418b

Specification

FDPS Antibody (Center) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P14324
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**389-419**

FDPS Antibody (Center) - 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 389-419 amino acids from the center region of human FDPS.

Dilution
WB~~1:1000
IHC-P~~1:10~50

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 (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

FDPS Antibody (Center) - Protein Information

Name FDPS (HGNC:3631)

Synonyms FPS, KIAA1293

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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.

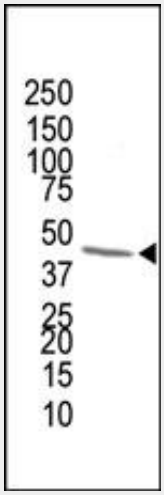
Cellular Location
Cytoplasm.

FDPS Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

FDPS Antibody (Center) - Images



The anti-FDPS Pab (Cat. #AP2418b) is used in Western blot to detect FDPS in human cytokeratin liver cell lysate. Data is kindly provided by Dr. Masaru Harada from Stanford University (Palo Alto, CA).

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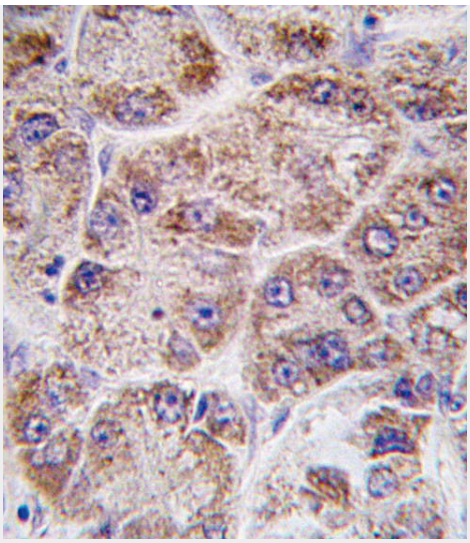

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with FDPS antibody (Center)(Cat.#AP2418b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

FDPS Antibody (Center) - 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.

FDPS Antibody (Center) - 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).

FDPS Antibody (Center) - Citations

- Liposome encapsulated zoledronate favours M1-like behaviour in murine macrophages cultured with soluble factors from breast cancer cells.
- Altered expression of farnesyl pyrophosphate synthase in prostate cancer: evidence for a role of the mevalonate pathway in disease progression?
- 5-Aza-2\'-deoxycytidine induced growth inhibition of leukemia cells through modulating endogenous cholesterol biosynthesis.
- Sterol-regulatory-element-binding protein 2 and nuclear factor Y control human farnesyl diphosphate synthase expression and affect cell proliferation in hepatoblastoma cells.
- Mevalonate pathway intermediates downregulate zoledronic acid-induced isopentenyl pyrophosphate and ATP analog formation in human breast cancer cells.
- Reduced expression of the mevalonate pathway enzyme farnesyl pyrophosphate synthase unveils recognition of tumor cells by Vgamma9Vdelta2 T cells.