

Rabbit Monoclonal Antibody to Human FDPS / Farnesyl Diphosphate Synthase



Sino Biological Inc.
Biological Solution Specialist

Catalog Number: 13229-R005

General Information	
Immunogen:	Recombinant Human FDPS / Farnesyl Diphosphate Synthase protein (Catalog#13229-H07E)
Clone ID:	005
Ig Type:	Rabbit IgG
Applications:	WB, ELISA, ICC/IF, IF, IP
Specificity:	Human FDPS / Farnesyl Diphosphate Synthase
Formulation:	0.2 µm filtered solution in PBS
Storage:	< -20°C

Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant Human FDPS / Farnesyl Diphosphate Synthase (rh FDPS / Farnesyl Diphosphate Synthase; Catalog#13229-H07E; NP_001129294.1; Met1-Lys353).

Specificity

Human FDPS / Farnesyl Diphosphate Synthase

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

Background

Z-farnesyl diphosphate synthase (FDPS) is an enzyme belonging to the family of transferases, specifically those transferring aryl or alkyl groups other than methyl groups. Z-farnesyl diphosphate synthase (FDPS) functions as key enzyme in isoprenoid biosynthesis which catalyzes the formation of farnesyl diphosphate, a precursor for several classes of essential metabolites. FDPS catalyzes the production of geranyl pyrophosphate and farnesyl pyrophosphate from isopentenyl pyrophosphate and dimethylallyl pyrophosphate. The resulting product, farnesyl pyrophosphate, is a key intermediate in cholesterol and sterol biosynthesis, a substrate for protein farnesylation and geranylgeranylation, and a ligand or agonist for certain hormone receptors and growth receptors. Drugs that inhibit this enzyme prevent the post-translational modifications of small GTPases and have been used to treat diseases related to bone resorption. Functions of FDPS may be inactivated by interferon-induced RSAD2. This inactivation may result of disruption of lipid rafts at the plasma membrane, and thus have an antiviral effect since many enveloped viruses need lipid rafts to bud efficiently out of the cell.

Reference

Pjetursson BE, *et al.* (2007) Comparison of survival and complication rates of tooth-supported fixed dental prostheses (FDPs) and implant-supported FDPs and single crowns (SCs). Clin Oral Implants Res. 3:97-113.

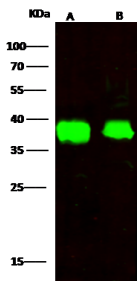
Eschbach S, *et al.* (2009) Clinical evaluation of all-ceramic posterior three-unit FDPs made of In-Ceram Zirconia. Int J Prosthodont. 22(5):490-2.

Moshage HJ, *et al.* (1990) Differential effects of endotoxin and fibrinogen degradation products (FDPS) on liver synthesis of fibrinogen and albumin: evidence for the involvement of a novel monokine in the stimulation of fibrinogen synthesis induced by FDPS. Int J Biochem. 22(12): 1393-400.

Applications

Western blot –

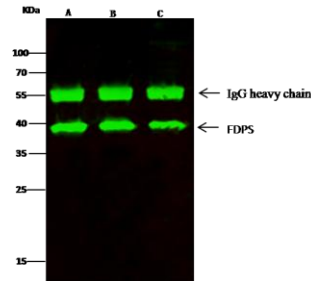
WB: 1-5 µg/mL



Lanes	A	B
Items		
Sample (whole cell lysate)	HepG2	Hela
Sample Volume (µg/lane)	30	30
Gel	13% SDS- PAGE reducing gel	
Recommended Concentration	1-5µg/ml	
Secondary Antibody	Dylight 800-labeled Antibody To Rabbit IgG (H+L), at 1:5000 dilution.	
Developed using Odyssey imaging system.		
Explanation	Predicted band size : 48 kDa Observed band size : 38 kDa	

Immunoprecipitation –

IP: 1-4 µg/mg of lysate



Lanes	A	B	C
Items			
Sample (whole cell lysate)	Hela	HepG2	A549
Sample quantity	0.5 mg		
IP antibody quantity	2 µg		
Protein G agarose	15 µl of 50% Protein G Agarose		
Gel	13% SDS-PAGE reducing gel		
Primary antibody	FDPS antibody at 2 µg/ml [Cat# 13229-R005]		
Secondary antibody	Dylight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilution.		

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Applications

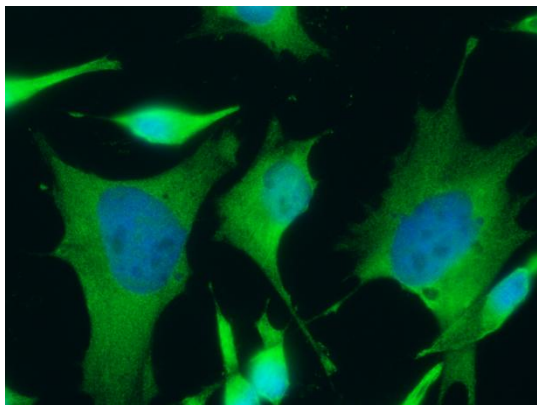
Direct ELISA – This antibody can be used at 0.1-0.2 µg/mL with the appropriate secondary reagents to detect Human FDPS / Farnesyl Diphosphate Synthase. The detection limit for Human FDPS / Farnesyl Diphosphate Synthase is 0.0012 ng/well.

Immunocytochemistry –

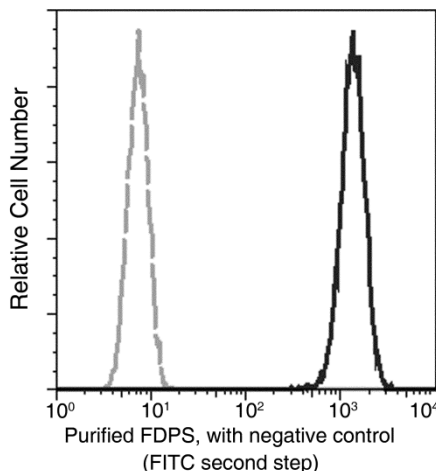
ICC/IF: 10-25 µg/mL

Flow Cytometry –

FCM: 0.5-2 µg/Test



Immunofluorescence staining of Human FDPS in HUVEC cells. Cells were fixed with 4% PFA, permeabilized with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with rabbit anti-Human FDPS monoclonal antibody (15 µg/ml) at 37°C 1 hour. Then cells were stained with the Alexa Fluor® 488-conjugated goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to cytoplasm.



Flow cytometric analysis of Human FDPS expression on HeLa cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human FDPS, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

Flow cytometry was performed on a BD FACSCalibur flow cytometry system. Please refer to www.sinobiological.com/Flow-Cytometry-FACS-Protocols-a-750.html for technical protocols.

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