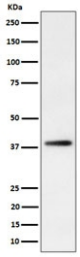
Farnesyl Diphosphate Synthase Antibody / FDPS Antibody [clone 28F58] (RQ8457)

Catalog No.	Formulation	Size
RQ8457	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	28F58
Purity	Affinity chromatography
UniProt	P14324
Applications	Western blot: 1:500-1:2000
Limitations	This Farnesyl Diphosphate Synthase Antibody / FDPS Antibody is available for research use only.



Farnesyl Diphosphate Synthase Antibody Human Cell WB. Western blot testing of human cell lysate using Farnesyl Diphosphate Synthase antibody detected a single band at approximately 38 kDa. Although the canonical molecular weight of FDPS is approximately 48 kDa, the mature enzyme commonly migrates at approximately 38-40 kDa following cleavage of its N-terminal mitochondrial targeting sequence. This Farnesyl Diphosphate Synthase Antibody, also called an FDPS Antibody, is useful for investigating isoprenoid biosynthesis, mevalonate pathway regulation, protein prenylation, and cholesterol metabolism.

Description

Farnesyl Diphosphate Synthase Antibody / FDPS Antibody recognizes farnesyl diphosphate synthase (FDPS), a key enzyme of the mevalonate pathway that catalyzes formation of farnesyl diphosphate from isopentenyl diphosphate and dimethylallyl diphosphate. Farnesyl diphosphate is a central metabolic intermediate required for the biosynthesis of cholesterol, steroid hormones, dolichols, ubiquinone, and numerous nonsterol isoprenoids. Through this pivotal enzymatic step, FDPS regulates multiple pathways involved in lipid metabolism, membrane biogenesis, cellular signaling, and

energy homeostasis.

FDPS also plays an essential role in protein prenylation by generating the lipid donor required for farnesylation and subsequent synthesis of geranylgeranyl pyrophosphate. Prenylation allows small GTPases, including members of the RAS, RHO, RAC, and RAB families, to associate with cellular membranes where they regulate proliferation, vesicle trafficking, cytoskeletal organization, and intracellular signaling. Because of these functions, FDPS influences diverse biological processes including immune responses, osteoclast function, embryonic development, and maintenance of normal tissue physiology.

Altered mevalonate pathway activity and increased FDPS expression have been reported in numerous cancers and metabolic disorders. FDPS is also the molecular target of nitrogen-containing bisphosphonates used to treat osteoporosis and skeletal complications associated with metastatic bone disease. Inhibition of FDPS suppresses osteoclast activity by disrupting protein prenylation, making the enzyme an important therapeutic target in bone biology, oncology, and metabolic research.

Clone 28F58 is a recombinant rabbit monoclonal antibody developed for highly specific detection of FDPS in research applications. Its recombinant design provides excellent specificity and lot-to-lot consistency for studies of mevalonate pathway regulation, isoprenoid biosynthesis, protein prenylation, cholesterol metabolism, and cancer biology. A Farnesyl Diphosphate Synthase Antibody is a valuable research tool for investigating FDPS, mevalonate pathway signaling, protein prenylation, isoprenoid biosynthesis, and metabolic disease.

For a broader overview of FDPS biology, isoprenoid biosynthesis, and mevalonate pathway regulation, see our FDPS Antibody / Isoprenoid Biosynthesis Enzyme Antibody page.

Application Notes

Optimal dilution of the Farnesyl Diphosphate Synthase Antibody / FDPS Antibody should be determined by the researcher.

Immunogen

A synthetic peptide derived from human Farnesyl Diphosphate Synthase protein was used as the immunogen for the Farnesyl Diphosphate Synthase antibody.

Storage

Store the Farnesyl Diphosphate Synthase antibody at -20oC.

Alternate Names

Farnesyl Diphosphate Synthase antibody, FDPS antibody, Farnesyl Pyrophosphate Synthase antibody, FPP Synthase antibody

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