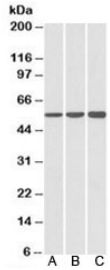
HMGCS1 Antibody (R36420)

Catalog No.	Formulation	Size
R36420-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	3157
Applications	Western Blot : 1-3ug/ml ELISA (peptide) LOD : 1:128000
Limitations	This HMGCS1 antibody is available for research use only.



HMGCS1 Antibody Human Cell Line WB. Western blot analysis of A) HeLa, B) HepG2, and C) K562 cell lysates using HMGCS1 Antibody demonstrates a prominent immunoreactive band at approximately 57 kDa in each sample, consistent with the expected molecular weight of HMGCS1 (3-Hydroxy-3-Methylglutaryl-CoA Synthase 1). HMGCS1 is a key cytosolic enzyme of the mevalonate pathway that catalyzes the production of HMG-CoA, an essential precursor for cholesterol and isoprenoid biosynthesis. The consistent detection of HMGCS1 across multiple human cell lines supports specific recognition of endogenous protein and demonstrates the suitability of this antibody for western blot applications. Predicted molecular weight: ~57 kDa. Observed molecular weight: ~57 kDa.

Description

HMGCS1 Antibody recognizes HMGCS1, a key metabolic enzyme that functions within the cytosolic branch of the mevalonate pathway. HMGCS1 catalyzes the synthesis of 3-hydroxy-3-methylglutaryl-CoA (HMG-CoA), an essential intermediate required for the production of cholesterol and numerous non-sterol isoprenoid compounds. Because the mevalonate pathway supplies metabolites necessary for membrane formation, protein modification, and signal

transduction, HMGCS1 serves as a critical regulator of cellular metabolism and growth.

HMGCS1 Antibody is useful for studying metabolic pathways that govern lipid synthesis, energy utilization, and cellular homeostasis. The enzyme is expressed in a wide range of tissues and is tightly regulated by sterol-responsive transcriptional networks that coordinate cholesterol production with cellular requirements. Changes in HMGCS1 expression can influence downstream metabolic processes that affect membrane dynamics, intracellular trafficking, and cell survival.

HMGCS1 Antibody is increasingly employed in studies of cardiovascular disease, metabolic disorders, and cancer. Altered cholesterol biosynthesis and mevalonate pathway activity have been associated with a variety of pathological conditions, including dyslipidemia, tumor progression, and abnormal cellular proliferation. As a result, HMGCS1 is frequently evaluated as a marker of metabolic pathway activation and cellular adaptation to changing physiological environments.

HMGCS1 Antibody supports research involving sterol metabolism, cholesterol biosynthesis, isoprenoid production, metabolic signaling, and disease-associated metabolic remodeling. Investigation of HMGCS1 expression provides important insights into the molecular mechanisms that connect cellular metabolism with growth regulation, differentiation, and disease development.

Researchers studying cholesterol biosynthesis, lipid metabolism, and mevalonate pathway regulation may also be interested in our HMGCS1 Antibody / Mevalonate Pathway Enzyme Antibody.

Application Notes

Optimal dilution of the HMGCS1 antibody should be determined by the researcher.

Immunogen

Amino acids KASSELFSQKTK were used as the immunogen for this HMGCS1 antibody.

Storage

Aliquot and store the HMGCS1 antibody at -20oC.

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