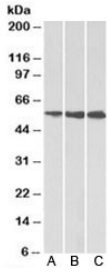
HMGCS1 Antibody (R36419)

Catalog No.	Formulation	Size
R36419-100UG	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 Multi-Cell Line WB. Western blot analysis of A) HeLa, B) HepG2, and C) K562 cell lysates using HMGCS1 Antibody. A distinct immunoreactive band is detected at approximately 57 kDa in all three cell lines, consistent with the predicted molecular weight of HMGCS1 (3-Hydroxy-3-Methylglutaryl-CoA Synthase 1). HMGCS1 is a key cytosolic enzyme of the mevalonate pathway that catalyzes the synthesis of HMG-CoA, an essential precursor for cholesterol and isoprenoid biosynthesis. The consistent detection of a single band across multiple human cell lines supports specific recognition of endogenous HMGCS1 and demonstrates the utility of this antibody for western blot applications. Predicted molecular weight: ~57 kDa. Observed molecular weight: ~57 kDa.

Description

HMGCS1 Antibody recognizes HMGCS1 (3-Hydroxy-3-Methylglutaryl-CoA Synthase 1), a cytosolic enzyme that catalyzes the formation of HMG-CoA from acetyl-CoA and acetoacetyl-CoA. This reaction represents an essential step within the mevalonate pathway, a highly conserved metabolic pathway responsible for the biosynthesis of cholesterol, isoprenoids, dolichols, and other critical cellular metabolites. Because these products are required for membrane

biogenesis, protein prenylation, intracellular signaling, and cellular growth, HMGCS1 plays a central role in maintaining metabolic homeostasis.

HMGCS1 Antibody is widely used for studying cholesterol biosynthesis and lipid metabolism. Expression of HMGCS1 is regulated by cellular sterol levels and metabolic demands, allowing cells to adjust cholesterol production in response to changing physiological conditions. Through its role in the mevalonate pathway, HMGCS1 contributes to membrane integrity, cell proliferation, and regulation of numerous signaling pathways required for normal cellular function.

HMGCS1 Antibody is also valuable for investigations of cancer metabolism and metabolic reprogramming. Increased activity of cholesterol biosynthetic pathways has been reported in a variety of malignancies, where enhanced lipid production can support rapid cell growth and survival. Consequently, HMGCS1 has become an important biomarker for studies examining the relationship between metabolism, proliferation, and disease progression.

HMGCS1 Antibody supports research involving cholesterol metabolism, mevalonate pathway regulation, lipid biosynthesis, cancer biology, and cellular signaling. Its central role in one of the most important anabolic pathways in mammalian cells has established HMGCS1 as a valuable target for metabolic and translational research.

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 ERNNLSYDCIGRLE were used as the immunogen for this HMGCS1 antibody.

Storage

Aliquot and store the HMGCS1 antibody at -20oC.

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