abcam

ab2740

Anti-Hepatitis C Virus Core 1b antibody [C7-50]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Clone number	C7-50
Purification technique	Affinity purification Protein A
Specificity	Detects hepatitis C virus (HCV) core protein from transfected human and primate cell lines.
Epitope	This antibody recognizes an epitope between amino acid residues 21-40 of HCV core protein. This sequence is conserved among different HCV strains.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Expected

Species	Hepatitis C virus
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Hepatitis C virus
Dilution info	1/100
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

ELISA

Expected

Species	Hepatitis C virus
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Expected

Species	Hepatitis C virus
Dilution info	1 µg/mL
Notes	This antibody detects a single ~21 kDa protein representing HCV core protein in various transfected cell lines.

Target data

See full target information Hepatitis C Virus Core 1b

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The Hepatitis C Virus Core 1b also recognized as HCV Core Protein or sometimes abbreviated as HCV Core is an important structural protein of the Hepatitis C Virus weighing approximately 21 kDa. This protein is mainly expressed in infected liver cells playing a central role in the virus's life cycle. It forms part of the viral nucleocapsid providing a protective shell for the viral genome. Through its structural role HCV Core Protein ensures the stability and integrity of the viral particles necessary for efficient infection and replication.
Biological function summary	The Hepatitis C Virus Core Protein influences various cellular processes. It interacts with host cell signaling pathways and cellular structures to facilitate viral replication. As part of a larger proteins complex the core protein contributes to the production of virus particles. Moreover it possesses regulatory roles that impact gene transcription and modulation of host cell immune responses further aiding viral propagation and persistence within the host.
Pathways	Studies show that HCV Core Protein is involved in disrupting normal cellular pathways such as the PI3K-Akt pathway which is significant for cell survival and anti-apoptosis mechanisms. It interacts with proteins like p53 and Bcl-2 which further link to the JAK-STAT pathway involved in immune modulation. These interactions illustrate how the core protein manipulates host cell environments to benefit viral survival and replication while potentially triggering pathogenic pathways within the host.
Associated diseases and disorders	The Hepatitis C Virus Core Protein holds connections to liver diseases notably chronic hepatitis and hepatocellular carcinoma. These conditions arise from the persistent infection and the core protein's interference with apoptotic and immune pathways contributing to carcinogenesis. It relates closely with other viral proteins like NS5A which together exacerbate liver fibrosis and cancer development. The core protein's pathogenic role highlights its interest as a target for anti-HCV therapies potentially guiding therapeutic antibody development against hepatitis C like anti-HCV core antibodies or anti-hepatitis C antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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Terms & Conditions.

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