# Anti-Hepatitis C Virus Core 1b antibody [C7-50] ab2740

**Product name**: Anti-Hepatitis C Virus Core 1b antibody [C7-50]

**Description**: Mouse monoclonal [C7-50] to Hepatitis C Virus Core 1b

**Host species**: Mouse

**Specificity**: Detects hepatitis C virus (HCV) core protein from transfected human and primate cell lines.

**Tested applications**

- **Suitable for**: IP, Flow Cyt, ICC/IF, IHC-P, ELISA, WB

**Species reactivity**

- **Reacts with**: Hepatitis C virus

**Immunogen**: Recombinant full length protein (GST-tag) corresponding to Hepatitis C Virus Core 1b.

**Epitope**: This antibody recognizes an epitope between amino acid residues 21-40 of HCV core protein. This sequence is conserved among different HCV strains.

## Properties

**Form**: Liquid

**Storage instructions**: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

**Storage buffer**: Preservative: 0.05% Sodium azide

Constituent: PBS

**Purity**: Protein A purified

**Clonality**: Monoclonal

**Clone number**: C7-50

**Isotype**: IgG1

## Applications

Our Abpromise guarantee covers the use of ab2740 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>IP</td>
<td>Use at an assay dependent concentration.</td>
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</table>
HCV (Hepatitis C Virus) viral core protein forms the internal viral coat that encapsidates the genomic RNA and is enveloped in a host cell-derived lipid membrane. The hepatitis C virus (HCV) core protein represents the first 177 amino acids of the viral precursor polyprotein and is cotranslationally inserted into the membrane of the endoplasmic reticulum. The N terminus of the core protein is involved in transcriptional repression. There are over 20 different subtypes of Hepatitis C Virus; HCV type 1b is mostly found in Europe and Asia. The prevalence of HCV type 1b infection has recently decreased, although it still accounts for most HCV-related cirrhosis and hepatocellular carcinoma. High HCV viremia levels and HCV genotype type 1b are independent predictors for poor response to interferon-alpha therapy. HCV core protein is among the most conserved proteins in HCV and is known to induce sensitization of cytotoxic T lymphocytes (CTL). Therefore, it is a prime candidate for a component of a potential HCV vaccine.

**Cellular localization**

Secreted; Host endoplasmic reticulum membrane; Single-pass membrane protein; Host nucleus; Host cytoplasm.

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<tr>
<td>Flow Cyt</td>
<td></td>
<td>1/100. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. PubMed: 20422251</td>
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<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. PubMed: 25155355</td>
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<tr>
<td>ELISA</td>
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<td>Use at an assay dependent concentration.</td>
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<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 1 µg/ml. This antibody detects a single ~21 kDa protein representing HCV core protein in various transfected cell lines.</td>
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**Target**

**Relevance**

HCV (Hepatitis C Virus) viral core protein forms the internal viral coat that encapsidates the genomic RNA and is enveloped in a host cell-derived lipid membrane. The hepatitis C virus (HCV) core protein represents the first 177 amino acids of the viral precursor polyprotein and is cotranslationally inserted into the membrane of the endoplasmic reticulum. The N terminus of the core protein is involved in transcriptional repression. There are over 20 different subtypes of Hepatitis C Virus; HCV type 1b is mostly found in Europe and Asia. The prevalence of HCV type 1b infection has recently decreased, although it still accounts for most HCV-related cirrhosis and hepatocellular carcinoma. High HCV viremia levels and HCV genotype type 1b are independent predictors for poor response to interferon-alpha therapy. HCV core protein is among the most conserved proteins in HCV and is known to induce sensitization of cytotoxic T lymphocytes (CTL). Therefore, it is a prime candidate for a component of a potential HCV vaccine.

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**Images**
ab2740 staining Hepatitis C Virus Core Antigen in the Huh7-Lunet Cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with Triton X-100 and blocked with 1% BSA for 30 minutes at 37°C. Samples were incubated with primary antibody (1/200 in PBS + 1% BSA) for 1 hour at 37°C. An undiluted Alexa Fluor® 647-conjugated Goat anti-mouse IgG monoclonal was used as the secondary antibody.

Immunofluorescence analysis of Huh-7.5.1 cells infected with either Hepatitis C virus (J6/JFH-C) or Hepatitis C virus defective in RNA polymerase activity (J6/JFH pol-null).

Hepatitis C Virus Core Antigen (red) was stained with ab2740 at 1/300 dilution, 96 hours after infection. A Cy3®-conjugated goat anti-mouse IgG polyclonal was used as the secondary antibody. Nuclei were stained with DAPI (blue).

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