

**Mouse Anti-HCV Core NS4 [5D4/10E7]: MC0593, MC0593RTU7**

**Intended Use:** For Research Use Only

**Description:** The Hep C (Hepatitis C) is a small, enveloped, single-stranded, positive sense RNA virus belonging to the family Flaviviridae. Transmission of the virus occurs when blood from an infected individual enters the body of an uninfected individual. Hep C primarily replicates within hepatocytes in the liver, and circulating Hep C particles bind to receptors on the surface and enter these cells. Hep C replicates quickly, producing approximately one trillion particles each day in infected individuals. Hep C RNA polymerase has no proofreading function, so the virus has an exceptionally high mutation rate which may help it elude the host's immune system. Hep C infection results in chronic infections, liver cirrhosis, and hepatocellular carcinoma in most people. Hep C NS3 (nonstructural protein 3) has both protease and helicase activities and is essential for Hep C replication and proliferation. Hep C NS4 (nonstructural protein 4) augments the proteolytic activity of Hep C NS3 through protein-protein interaction.

**Specifications:**

Clone: 5D4/10E7  
 Source: Mouse  
 Isotype: IgG1  
 Reactivity: Human  
 Localization: Endoplasmic reticulum; multi-pass membrane protein  
 Formulation: Antibody in PBS pH7.4, containing BSA, and ≤ 0.09% sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, IF  
 Package:

Description	Catalog No.	Size
HCV Core NS4 Concentrated	MC0593	1 ml
HCV Core NS4 Prediluted	MC0593RTU7	7 ml

**IHC Procedure\*:**

Positive Control Tissue: HCV infected liver  
 Concentrated Dilution: 50-200  
 Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human liver cancer stained with anti-HCV Core NS4 using DAB

**References:**

1. Acosta-Rivero, N., et al. Nucleic acid binding in *Pichia pastoris*. *Biochem. Biophys. Res. Commun.* 323: 926-931, 2004.
2. Detection and quantitation of HCV core protein in single hepatocytes by means of laser capture microdissection and enzyme-linked immunosorbent assay. Sansonno, D., et al. *J. Viral Hepat* 11: 27-32, 2004.
3. The roles of Hepatitis C virus proteins in a novel action mechanism of the HCV core protein on gene regulation by nuclear hormone receptors. Watashi, K., et al. *Cancer Sci.* 94: 937-943, 2003.
4. Back, S.H., et al. Expression and purification of an active, full-length Hepatitis C viral NS4a. *Protein Expr. Purif.* 20: 196-206, 2000.

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