

Hep C cAg (1851): sc-58144

BACKGROUND

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 immune system of the host. Hep C infection results in chronic infections, liver cirrhosis and hepatocellular carcinoma in most people. The core protein of Hep C, known as Hep C cAg, is well conserved among the different viral genotypes and may contribute to the hepatic fibrogenesis by up-regulating connective tissue growth factor and TGF β 1.

REFERENCES

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3. Sansonno, D., et al. 2004. Detection and quantitation of HCV core protein in single hepatocytes by means of laser capture microdissection and enzyme-linked immunosorbent assay. *J. Viral Hepat.* 11: 27-32.
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5. Carabaich, A., et al. 2005. Profiles of HCV core protein and viremia in chronic hepatitis C: possible protective role of core antigen in liver damage. *J. Med. Virol.* 76: 55-60.
6. Shin, J.Y., et al. 2005. HCV core protein promotes liver fibrogenesis via up-regulation of CTGF with TGF- β 1. *Exp. Mol. Med.* 37: 138-145.
7. Kimball, P., et al. 2005. HCV core protein augments cyclosporine immunosuppression. *Transplant. Proc.* 37: 652-653.
8. Gu, J., et al. 2005. Morphological alteration and biological properties of hepatocytes not related to tumorigenesis following transfection with HCV core protein. *J. Viral Hepat.* 12: 20-26.
9. Alvarez-Lajonchere, L., et al. 2006. Hepatitis C virus (HCV) core protein enhances the immunogenicity of a co-delivered DNA vaccine encoding HCV structural antigens in mice. *Biotechnol. Appl. Biochem.* 44: 9-17.

SOURCE

Hep C cAg (1851) is a mouse monoclonal antibody raised against hepatitis C virus.

PRODUCT

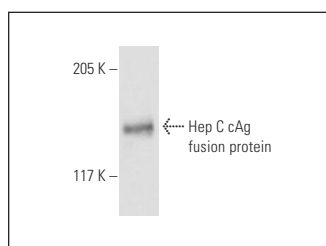
Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Hep C cAg (1851) is recommended for detection of an epitope corresponding to amino acids 29-39 of core antigen of Hep C by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Hep C cAg: 22 kDa.

DATA



Hep C cAg (1851): sc-58144. Western blot analysis of human recombinant Hepatitis C virus (HCV) core antigen fusion protein.

SELECT PRODUCT CITATIONS

1. Liu, M., et al. 2022. CpG island methylation of suppressor of cytokine signaling-1 gene induced by HCV is associated with HCV-related hepatocellular carcinoma. *Front. Microbiol.* 13: 679593.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **Hep C cAg (C7-50): sc-57800** for Hep C cAg antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.