

Hep C NS5a (388): sc-57776

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 host's immune system. Hep C infection results in chronic infections, liver cirrhosis and hepatocellular carcinoma in most people. Hep C NS5a (nonstructural protein 5A) is a phosphoprotein and the phosphorylation state of Hep C NS5a is important for the outcome of viral RNA replication.

REFERENCES

1. Watashi, K. and Shimotohno, K. 2003. The roles of Hepatitis C virus proteins in a novel action mechanism of the HCV core protein on gene regulation by nuclear hormone receptors. *Cancer Sci.* 94: 937-943.
2. Acosta-Rivero, N., et al. 2004. Nucleic acid binding properties and intermediates of HCV core protein multimerization in *Pichia pastoris*. *Biochem. Biophys. Res. Commun.* 323: 926-931.
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.
4. Alisi, A., et al. 2005. Thr 446 phosphorylation of PKR by HCV core protein deregulates G₂/M phase in HCC cells. *J. Cell. Physiol.* 205: 25-31.
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. 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.
7. Kimball, P., et al. 2005. HCV core protein augments cyclosporine immunosuppression. *Transplant. Proc.* 37: 652-653.
8. 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. *Appl. Biochem. Biotechnol.* 44: 9-17.

SOURCE

Hep C NS5a (388) is a mouse monoclonal antibody raised against full length Hep C NS5a.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Hep C NS5a (388) is recommended for detection of NS5a genotypes 1a and 1b of Hep C origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Hep C NS5a: 58 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Sabri, S., et al. 2014. Studies on the role of NS3 and NS5A non-structural genes of hepatitis C virus genotype 3a local isolates in apoptosis. *Int. J. Infect. Dis.* 25: 38-44.

STORAGE

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

PROTOCOLS

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