



Hep C NS5a (1877): sc-65458

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

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2. Acosta-Rivero, N., Rodriguez, A., Musacchio, A., Falcón, V., Suarez, V.M., Chavez, L., Morales-Grillo, J. and Duenas-Carrera, S. 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., Lauletta, G. and Dammacco, F. 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., Mele, R., Spaziani, A., Tavolaro, S., Palescandolo, E. and Balsano, C. 2005. Thr 446 phosphorylation of PKR by HCV core protein deregulates G₂/M phase HCC cells. *J. Cell. Physiol.* 205: 25-31.
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6. Gu, J., Wang, L., Che, Y., Liu, L., Jiang, L., Dong, S., Li, W. and Li, Q. 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., Verbeke, S. and Shiffman, M. 2005. HCV core protein augments cyclosporine immunosuppression. *Transplant. Proc.* 37: 652-653.
8. Alvarez-Lajonchere, L., González, M., Alvarez-Obregón, J.C., Guerra, I., Viña, A., Acosta-Rivero, N., Musacchio, A., Morales, J. and Dueñas-Carrera, S. 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 NS5a (1877) 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.

APPLICATIONS

Hep C NS5a (1877) 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.

SELECT PRODUCT CITATIONS

1. Peng, M., Xiao, X., He, Y., Jiang, Y., Zhang, M., Peng, F., Tian, Y., Xu, Y. and Gong, G. 2015. HIV Vpr protein upregulates microRNA-122 expression and stimulates hepatitis C virus replication. *J. Gen. Virol.* 96: 2453-2463.
2. Kim, K., Lee, Y.S., Jeong, S., Kim, D., Chon, S., Pak, Y.K., Kim, S., Ha, J., Kang, I. and Choe, W. 2020. A small molecule, 4-phenylbutyric acid, suppresses HCV replication via epigenetically induced hepatic hepcidin. *Int. J. Mol. Sci.* 21: E5516.
3. Jeong, S., Lee, Y.S., Kim, K., Yoon, J.S., Kim, S., Ha, J., Kang, I. and Choe, W. 2021. 2-O-methylhonokiol suppresses HCV replication via TRAF6-mediated NF-κB activation. *Int. J. Mol. Sci.* 22: 6499.

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.