

Hep C NS4 (1G7): sc-52414

BACKGROUND

Hepatitis C virus (HCV), the major causative agent of chronic and sporadic non-A, non-B hepatitis worldwide, and GBV-C or hepatitis G virus (HGV), which is closely related to HCV, are members of the hepacivirus genus of the flaviviridae family. Nonstructural (NS) proteins of HCV play major roles in viral replication and the pathogenesis of liver diseases. HCV non-structural proteins, including NS5a, form a large multiprotein replication complex, which directs the replication of the HCV genome. The NS5a nonstructural protein of HCV has been shown to inhibit the cellular interferon (IFN)-induced protein kinase R (PKR). The nonstructural protein 5b (NS5b) of HCV is an RNA-dependent RNA polymerase (RdRp) which plays an essential role in viral RNA replication. The NS3 protein of hepatitis C virus (HCV) contains protease and RNA helicase activities, both of which are likely to be essential for HCV propagation. The HGV NS3 protease is responsible for the cleavage of the HGV polyprotein at four different locations. The small proteins NS2a, NS2b, NS4a and NS4b are hydrophobic, suggesting a possible membrane-related function.

REFERENCES

1. Pawlotsky, J.M., et al. 1999. The non-structural 5A protein of hepatitis C virus. *J. Viral. Hepat.* 5: 343-356.
2. Lohmann, V., et al. 2000. Biochemical and structural analysis of the NS5B RNA-dependent RNA polymerase of the hepatitis C virus. *J. Viral. Hepat.* 3: 167-174.
3. Garcia, F., Jr., et al. 2000. Genomic variability of hepatitis G virus/GBV-C at the NS3 region: clinical implications. *Microbios* 401: 17-25.
4. He, Y., et al. 2001. Regulation of mRNA translation and cellular signaling by hepatitis C virus nonstructural protein NS5A. *J. Virol.* 11: 5090-5098.
5. Ingravallo, P., et al. 2001. Characterization of monoclonal antibodies that specifically recognize the palm subdomain of hepatitis C virus nonstructural protein 5B polymerase. *Virus Res.* 2: 179-187.
6. Rho, J., et al. 2001. The arginine 1493 residue in 1493 motif IV of the hepatitis C virus NS3 helicase domain is essential for NS3 protein methylation by the protein arginine methyltransferase 1. *J. Virol.* 17: 8031-8044.
7. Lee, Y.J., et al. 2001. Assessment of substrate specificity of hepatitis G virus NS3 protease by a genetic method. *Biochem. Biophys. Res. Commun.* 1: 171-175.

SOURCE

Hep C NS4 (1G7) is a mouse monoclonal antibody raised against a recombinant fragment, corresponding to amino acids 1685-1863 of NS4 region of Hep C.

PRODUCT

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

Hep C NS4 (1G7) is available conjugated fluorescein (sc-52414 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

APPLICATIONS

Hep C NS4 (1G7) is recommended for detection of NS4 region of Hep C origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Molecular Weight of Hep C NS4a: 8 kDa.

Molecular Weight of Hep C NS4b: 27 kDa.

SELECT PRODUCT CITATIONS

1. Xu, S., et al. 2012. Cytosolic phospholipase A₂ γ is involved in hepatitis C virus replication and assembly. *J. Virol.* 86: 13025-13037.

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.