



# Hep C NS5 (BGN/1246/5A6): sc-80818

## BACKGROUND

Hep C (Hepatitis C), the major causative agent of chronic and sporadic non-A, non-B hepatitis worldwide, and Hep G, which is closely related to Hep C, are members of the hepacivirus genus of the flaviviridae family. Nonstructural (NS) proteins of Hep C play major roles in viral replication and the pathogenesis of liver diseases. Hep C NS (non-structural protein), including NS5a, form a large multiprotein replication complex, which directs the replication of the Hep C genome. The Hep C NS5a has been shown to inhibit the cellular interferon (IFN)-induced protein kinase R (PKR). The Hep C NS5b is an RNA-dependent RNA polymerase (RdRp) which plays an essential role in viral RNA replication. The Hep C NS3 protein contains protease and RNA helicase activities, both of which are likely to be essential for Hep C propagation. The Hep G NS3 protease is responsible for the cleavage of the Hep G 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 NS5 (BGN/1246/5A6) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 2241-2497 of the Japanese isolate of Hep C.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Hep C NS5 (BGN/1246/5A6) is recommended for detection of NS5 region 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

## 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.