SANTA CRUZ BIOTECHNOLOGY, INC.

Hep C NS5b (vD-20): sc-17532

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The Power to Question

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 multi-protein replication complex, which directs the replication of the Hep C genome. Hep C NS5a has been shown to inhibit the cellular interferon (IFN)-induced protein kinase R (PKR). It 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

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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. 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.
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7. Rho, J., et al. 2001. The Arginine-1493 residue in QRRGRTGR1493G 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.

SOURCE

Hep C NS5b (vD-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Hep C NS5b.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17532 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Hep C NS5b (vD-20) is recommended for detection of NS5b region of Hep C origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Hep C NS5b: 58 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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.

SELECT PRODUCT CITATIONS

1. Lan, S., et al. 2003. Direct interaction between α-actinin and hepatitis C virus NS5b. FEBS Lett. 554: 289-294.
2. Kim, S.J., et al. 2004. Protein kinase C-related kinase 2 regulates hepatitis C virus RNA polymerase function by phosphorylation. J. Biol. Chem. 279: 50031-50041.
3. Hakki, M., et al. 2006. Binding and nuclear relocalization of protein kinase R by human Cytomegalovirus TRS1. J. Virol. 80: 11817-11826.
4. Zhang, J., et al. 2007. Helper virus-independent *trans*-replication of hepatitis C virus-derived minigenome. Biochem. Biophys. Res. Commun. 352: 170-176.
5. Ciccaglione, A.R., et al. 2007. Repression of interferon regulatory factor 1 by hepatitis C virus core protein results in inhibition of antiviral and immunomodulatory genes. J. Virol. 81: 202-214.
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7. Chen, Y.J., et al. 2010. Heat shock protein 72 is associated with the hepatitis C virus replicase complex and enhances viral RNA replication. J. Biol. Chem. 285: 28183-28190.

STORAGE

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