

Hep C NS4a (4F5): sc-52415

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

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2. 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.
3. 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.
4. Sansonno, D., et al. 2004. Detection and quantitation of of laser capture microdissection and enzyme-linked immunosorbent assay. *J. Viral Hepat.* 11: 27-32.
5. Umehara T, et al. 2004. Designing and analysis of a potent bi-functional aptamers that inhibit protease and helicase activities of HCV NS3. *Nucleic Acids Symp. Ser.* 48: 195-196.
6. Alisi, A., et al. 2005. Thr 446 phosphorylation of PKR by HCV core protein deregulates G2/M phase HCC cells. *J. Cell. Physiol.* 205: 25-31.
7. 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.
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SOURCE

Hep C NS4a (4F5) is a mouse monoclonal antibody raised against a recombinant fragment, corresponding to amino acids 1700-1710 of NS4a region of Hep C.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Hep C NS4a (4F5) is recommended for detection of NS4a region of Hep C origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Hep C NS4a: 8 kDa.

SELECT PRODUCT CITATIONS

1. Butt, S., et al. 2011. Establishment of stable Huh-7 cell lines expressing various hepatitis C virus genotype 3a protein: an *in vitro* testing system for novel anti-HCV drugs. *Genet. Vaccines Ther.* 9: 12.

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.