

# Hep C E2 (1876): sc-65457

## 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 immune system of the host. Hep C infection results in chronic infections, liver cirrhosis and hepatocellular carcinoma in most people. The transmembrane (TM) domains of Hep C envelope glycoproteins E1 and E2 play multiple functions during the biogenesis of the E1E2 heterodimer. E1 and E2 also play an important role in cell entry.

## 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., Palessandolo, E. and Balsano, C. 2005. The 446 phosphorylation of PKR by HCV core protein deregulates G<sub>2</sub>/M phase in HCC cells. *J. Cell. Physiol.* 205: 25-31.
5. Carabaich, A., Ruvoletto, M., Bernardinello, E., Tono, N., Cavalletto, L., Chemello, L., Gatta, A. and Pontisso, P. 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.
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.
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## SOURCE

Hep C E2 (1876) is a mouse monoclonal antibody raised against full length Hep C E2.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Hep C E2 (1876) is recommended for detection of E2 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 E2: 70 kDa.

## SELECT PRODUCT CITATIONS

1. Butt, S., Idrees, M., Rehman, I.U., Ali, L., Hussain, A., Ali, M., Ahmed, N., Saleem, S. and Fayyaz, M. 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.
2. Rafique, S., Idrees, M., Ali, A. and Iqbal, M. 2014. Studies on the role of neutralizing antibodies against envelope genes in resolving HCV pseudo-particles infection. *Mol. Biol. Rep.* 41: 3945-3950.
3. Rafique, S., Idrees, M., Ali, A., Sahibzada, K.I. and Iqbal, M. 2014. Generation of infectious HCV pseudo typed particles and its utilization for studying the role of CD81 & SRBI receptors in HCV infection. *Mol. Biol. Rep.* 41: 3813-3819.

## 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](http://www.scbt.com) for detailed protocols and support products.