

Anti-Hepatitis C Virus (HCV) NS5a protein antibody, monoclonal (8926) Biotinylated IgG

65-063 50 µg

Hepatitis C virus (HCV) is a small (55-65 nm in size), enveloped, positive sense single-stranded RNA virus in the family *Flaviviridae* and the principal cause of parenteral non-A, non-B hepatitis. The virus genome consists of a single open reading frame of approximately 9,400 bases which encodes a single polyprotein of about 3,010 amino acids (1, 2, 3). The polyprotein is processed by host cell and viral proteases into four structural proteins (core, envelope1 and 2, and p7) and six non-structural proteins (NS2, 3, 4a, 4b, 5a, and 5b) necessary for viral replication. The primary function of NS5a is not known, but from the comparative studies with other viruses it is predicted to play a role in RNA replication.

This product is a biotinylated IgG ([biotin]/[IgG] = 9.6) produced from the IgG fraction.

Applications:

1. Western blot
2. Immunofluorescence staining
3. FACS

Specification:

Immunogen: A region of NS5a protein (the nucleotide sequence is shown in ref.4) of HCV genotype 1b expressed in *E. coli*.

Isotype: Mouse IgG2a kappa

Form: Purified monoclonal antibody (IgG) 0.8 mg/ml in PBS, 50% glycerol, filter-sterilized

Specificity: Specific to human HCV NS5a protein of genotype 1b. Not tested for other genotypes.

Storage: Ship at 4°C and store at -20°C

Data Link: UniProtKB [HCV protein](#)

References: This antibody is produced and used in ref. 4.

1. Choo, Q-L. *et al.* (1989) "Isolation of a cDNA clone derived from a blood-borne non-A, non-B viral hepatitis genome. *Science* 244, 359-362 [PMID: 2523562](#)
2. Kato N *et al* (1990) "Molecular cloning of the human hepatitis C virus genome from Japanese patients with non-A, non-B hepatitis" *Proc Natl Acad Sci USA* 87: 9524-9528 [PMID: 2175903](#)
3. Takamizawa A *et al* (1991) "Structure and organization of the hepatitis C virus genome isolated from human carriers" *J Virol* 65: 1105-1113 [PMID: 1847440](#)
4. Manabe S *et al* (1994) "Production of nonstructural proteins of hepatitis C virus requires a putative viral protease encoded by N3" *Virology* 198: 636-644 [PMID: 8291245](#)

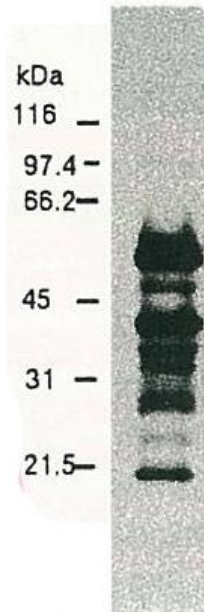


Fig. 1. Western blotting of HCV NS5a protein. Chimp liver cells were infected with recombinant vaccinia virus containing a HCV genome cDNA and were subjected to Western blotting using anti-NS5a antibody. The protein detected with this antibody is 6 kD. The multitude of NS5a-specific products must be the degraded products of NS5a protein (52 kD)



Fig. 2. Detection of HCV NS5a protein by immunofluorescence antibody staining. Chimp liver cells were infected with recombinant vaccinia virus containing a HCV genome cDNA. After incubation for 48 hr, the cells were fixed with acetone and HCV NS5a protein was detected by indirect immunofluorescence staining using this antibody.