COSMO BIO CO., LTD.
Inspiration for Life Science

MONOCLONAL ANTIBODY

For research use only. Not for clinical diagnosis.

Catalog No. 65-059EX

Anti-Hepatitis C Virus (HCV) NS4a protein antibody (S4-13)FITC-labeled IgG

BACKGROUND

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. NS3 serine proteinase is responsible for proteolytic processing of other non-structural proteins. **NS4a protein** (54 amino acids) forms a comlex with NS3 and functions as a cofactor for NS3 protease activity.

This product is an FITC-labeled IgG ([FITC]/[IgG] = 10.4) produced from the IgG fraction

Product type	Primary antibodies
Host	Mouse
Source	
Form	Purified monoclonal antibody (IgG) 1.4 mg/ml in PBS, 50% glycerol, filter-sterilized
Volume	50 μg
Concentration	
Specificity	Specific to human HCV NS4a protein
Antigen	A region of NS4 protein (the nucleotide sequence is shown in ref.4) of **HCV genotype 1b** expressed in E.coli. The epitope of this antibody was mapped to the N-terminal region of the NS4 protein (**NS4a**).
Clone	S4-13
Isotype	Mouse IgG2b kappa

Application notes

1.WB 2. Immunofluorescence staining 3. ELISA 4. FACS

Other applications have not been tested.

Optimal dilutions/concentrations should be determined by the end user.

UniProtKB HCV protein

Storage

-20℃.

References

(This antibody is produced and used in ref.4.)

1. Brass V *et al* (2006) Molecular Virology of Hepatitis C Virus (HCV): 2006 Update *Int J Med Sci* **3**:29-34 PMID: 16614739
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

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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

Related products

#65-056EX anti-HCV NS4a antibody
#65-058EX anti-HCV NS4a antibody biotinylated

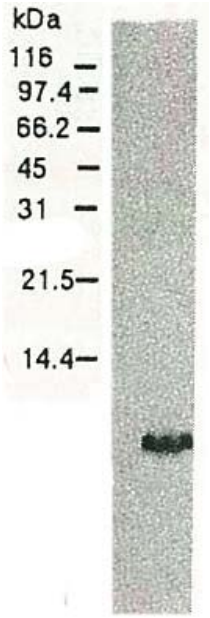

Fig.1 Western blotting of HCV NS4a protein.
Chimp liver cells were infected with recombinant vaccinia virus containing a HCV genome cDNA and were subjected to Western blotting using anti-NS4a antibody. The protein detected with this antibody is
6 kD. This small NS4 protein (NS4a) was produced from the N-terminal region of the NS4 protein.

Fig.2 Detection of HCV NS4a protein by immuno-fluorescence 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 NS4a protein was detected by indirect immunofluorescence staining using this antibody.

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