Anti-HCV Core protein antibody, mouse monoclonal (H6-29)

Product code	65-052
Size	100 µg
Storage	-20℃
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from hybridoma cell culture medium.
Immunogen	A part of the **core** region (nucleotides 369-704, amino acids 13-124) of **HCV genotype 1b** expressed in *E. coli* (the nucleotide sequence is shown in ref.1)
Isotype	Mouse IgG2aκ
Reactivity	Human HCV core antigen, p21, of genotype 1b. Not tested in other genotypes
Special notes	N/A
Application	1. Western blotting (1/1,000~1/2,000) 2. Immunohistochemistry (1/100~1/500) 3. Immunofluorescence staining (1/100~1/500) 4. ELISA (assay dependent)
Background	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 9,4 kb 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. HCV core protein is not only a component of nucleocapsid but also has multiple functions and is thought to be a pathogenic factor for hepatitis. It also participates in some cellular processes, including transcriptional regulation and cellular transduction. HCV core antigen is used as diagnostic marker for HCV infection.
Data Link	UniProtKB:P26662 ((POLG_HCVJA)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

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Data Images: 65-052 Anti-HCV Core protein antibody, mouse monoclonal (H6-29)

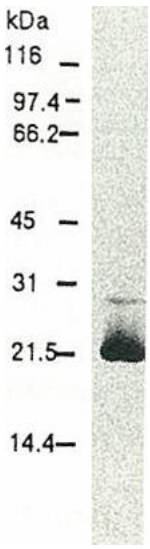

Fig.1　Western blotting of HCV core protein.

Chimp liver cells were infected with recombinant vaccinia virus containing HCV genome cDNA and were subjected to Western blotting using this antibody. The core protein is detected as a 22-kDa band.

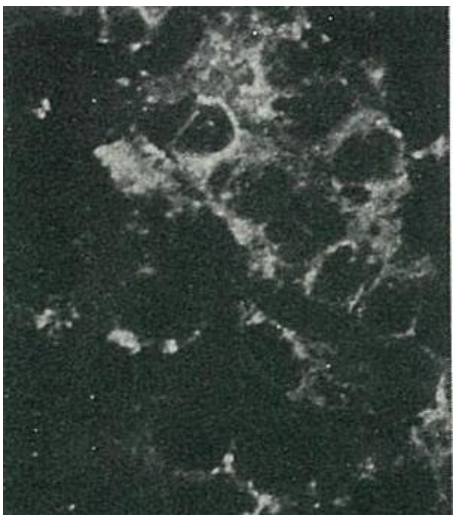

Fig.2　Detection of HCV core protein by immuno- fluorescence antibody staining.

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

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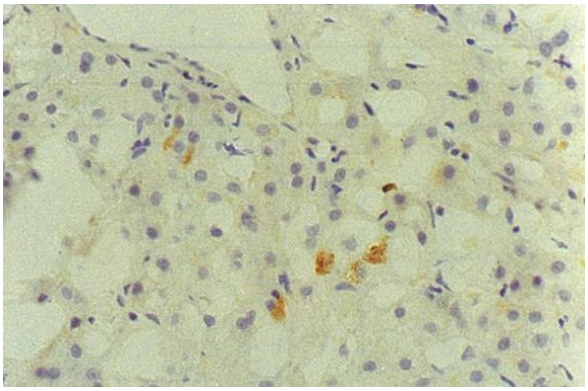

Fig.3　Immunohistochemical detection of HCV core protein.

Tissue section from a patient with chronic hepatitis C was immunostained to reveal cells expressing HCV core antigen, which are scattered in the lobules (indirect immuno-histochemical method, counterstained with Mayer's hematoxylin).

References: This antibody has been used in Publications 2 and 3.　Ref 1 describes HCV clone used for immunogen production.

1. 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
2. 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
3. Hiramatsu N *et al* (1992) "Immunohistochemical detection of hepatitis C virus-infected hepatocytes in chronic liver disease with monoclonal antibodies to core, envelope and NS3 regions of the hepatitis C virus genome" *Hepatology* 16: 306-311 PMID:1379209

Related products

65-053 Anti-HCV core protein antibody, mouse monoclonal (H6-29) (biotin)

65-054 Anti-HCV core protein antibody, mouse monoclonal (H6-29) (FITC)

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