

Recombinant Hepatitis C Virus Nucleocapsid core Genotype-1

DAG1371 *Hepatitis C Virus*
Lot. No. (See product label)

PRODUCT INFORMATION

Product overview	Recombinant HCVgp1 protein containing amino acids 1-102 was expressed in <i>E. coli</i> and purified by proprietary chromatographic technique.
Antigen Description	The hepatitis C virus (HCV) core protein represents the first 191 amino acids of the viral precursor polyprotein and is cotranslationally inserted into the membrane of the endoplasmic reticulum. Hepatitis C virus (HCV) core is a viral structural protein; it also participates in some cellular processes, including transcriptional regulation. However the mechanisms of core-mediated transcriptional regulation remain poorly understood. Hepatitis C virus (HCV) core protein is thought to contribute to HCV pathogenesis through its interaction with various signal transduction pathways. In addition, HCV core antigen is a recently developed marker of hepatitis C infection. The HCV core protein has been previously shown to circulate in the bloodstream of HCV-infected patients and inhibit host immunity through an interaction with gC1qR.
Source	<i>E. coli</i>
Species	Hepatitis C Virus
Tag	N/A
Conjugate	N/A
Purity	>95% pure as determined by 10% PAGE (coomassie staining).
Characteristic	Immunoreactive with sera of HCV-infected individuals.
Applications	HCV Core Genotype-1 antigen is suitable for ELISA and Western blots, excellent antigen for detection of HCV with minimal specificity problems.
Usage	The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

PACKAGING

Storage	stable at 4°C for 1 week, should be stored below -18°C. Please prevent freeze thaw cycles.
Buffer	50mM Tris. pH-8 & 5mM EDTA.

BACKGROUND

Introduction	HCV is a small 50nm, enveloped, single-stranded, positive sense RNA virus in the family Flaviviridae. HCV has a high rate of replication with approximately one trillion particles produced each day in an infected individual. Due to lack of proofreading by the HCV RNA polymerase, the HCV has an exceptionally high mutation rate, a factor that may help it elude the host's immune response. Hepatitis C virus is classified into six genotypes (1-6) with several subtypes within each genotype. The preponderance and distribution of HCV genotypes varies globally. Genotype is clinically important in determining potential response to interferon-based therapy and the required duration of such therapy. Genotypes 1 and 4 are less responsive to interferon-based treatment than are the other genotypes (2, 3, 5 and 6).
Keywords	HCcAg; Core protein p19; HCV core antigen; HCV core protein; Hepatitis C Virus core protein; HCV-1 Core Ag; Hepatitis C Virus Core Antigen, genotype 3/10; Flaviviridae; Hepacivirus

REFERENCES

1. Tellinghuisen TL, Paulson MS, Rice CM. The NS5A protein of bovine viral diarrhea virus contains an essential zinc-binding site similar to that of the hepatitis C virus NS5A protein. J Virol. Aug 2006; 80(15):7450-8.