

HCV-NC 22 kDa (residues 2-192) (Hepatitis C Virus Nucleocapsid) Recombinant, *E. coli*

Cat. No.	Amount
PR-1144	100 μ g

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied 20 mM Tris-HCl pH 8, 8 M urea and 10 mM β -ME.

Specificity

Immunoreactive with sera of HCV-infected individuals.

Purity

>95% by SDS-PAGE and RP-HPLC

Description

The protein contains the HCV core nucleocapsid immunodominant regions, amino acids 2-192, with a molecular weight of 22 kDa.

Hepatitis C Virus core proteins are purified by proprietary chromatographic techniques.

Applications

Antigen in ELISA and Western blots, excellent antigen for detection of HCV with minimal specificity problems.

Background

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 (ER)

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. It is remarkably efficient at establishing persistent infection, suggesting that it has evolved one or more strategies aimed at evading the host immune response. T cell responses, including interferon-gamma production, are severely suppressed in chronic HCV patients. 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.

Selected References:

- Kang *et al.* (2005) Proteomic profiling of cellular proteins interacting with the hepatitis C virus core protein. *Proteomics*. Apr 21; [Epub ahead of print].
- Fukutomi *et al.* (2005) Hepatitis C virus core protein stimulates hepatocyte growth: Correlation with upregulation of wnt-1 expression. *Hepatology*. **41**:1096.
- Gaudy *et al.* (2005) Usefulness of the hepatitis C virus core antigen assay for screening of a population undergoing routine medical checkup. *J. Clin. Microbiol.* **43**:1722.
- Lindh *et al.* (2005) Monitoring treatment response by the hepatitis C virus core antigen assay. *Eur. J. Clin. Microbiol. Infect. Dis.* **24**:230.
- Boni *et al.* (2005) Hepatitis C Virus Core Protein Acts as a trans-Modulating Factor on Internal Translation Initiation of the Viral RNA. *J. Biol. Chem.* **280**:17737.