

## HCV-NS3-S5 (residues 1359-1456)

(Hepatitis C Virus Non-Structural protein, Subtype 5)

Recombinant, *E. coli*

Cat. No.	Amount
PR-1158-1	1 mg

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

### Avoid freeze / thaw cycles

### Form

Liquid. Supplied as 1 mg/ml solution in 25 mM Tris-HCl, pH 7.5, 1 mM EDTA, 1.5 M urea, and 50% glycerol.

### Specificity

Immunoreactive with sera of HCV-infected individuals.

### Purity

>95% by SDS-PAGE and RP-HPLC

### Description

The protein contains the HCV NS3 (c33c) immunodominant region, amino acids 1359-1456.

Hepatitis C NS3 protein is purified by proprietary chromatographic techniques.

### Applications

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

### Background

The nonstructural protein NS3 of the hepatitis C virus (HCV) is indispensable for virus replication and a multi-functional enzyme that contains three catalytic activities such as serine protease, helicase, and NTPase. The N-terminal domain of the protein contains protease activity and the C-terminal domain contains nucleotide triphosphatase and RNA helicase activity.

It has been shown that NS2/3 cleavage is mediated by NS2-3 protease, whereas NS3 serine protease is responsible for the other four cleavage sites of the nonstructural (NS) region.

Immunoblot analysis on serum samples from 90 patients with chronic hepatitis C virus infection revealed four putative immunogenic regions within the NS3 protein of the virus: E (around amino acids 1250/1251), A (within amino acids 1250-1334), A/B (around amino acids 1323 and 1334), and B/C (around amino acids 1407 and 1412). Among them, region E was most immunodominant, and region A was recognized much less frequently by patients with cirrhosis than by those with chronic hepatitis.

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### Selected References:

Gal-Tanamy *et al.* (2005) HCV NS3 serine protease-neutralizing single-chain antibodies isolated by a novel genetic screen. *J. Mol. Biol.* **347**:991.

Duan *et al.* (2004) Antiviral compounds from traditional Chinese medicines Galla Chinese as inhibitors of HCV NS3 protease. *Bioorg. Med. Chem. Lett.* **14**:6041.

Sun *et al.* (2004) P4 cap modified tetrapeptidyl alpha-ketoamides as potent HCV NS3 protease inhibitors. *Bioorg. Med. Chem. Lett.* **14**:4333.

Nizi *et al.* (2004) Capped dipeptide phenethylamide inhibitors of the HCV NS3 protease. *Bioorg. Med. Chem. Lett.* **14**:2151.

Liu *et al.* (2003) Double-stranded DNA-induced localized unfolding of HCV NS3 helicase subdomain 2. *Protein Sci.* **12**:2757.

Hedge *et al.* (2003) Two antiviral compounds from the plant *Stylogne cauliflora* as inhibitors of HCV NS3 protease. *Bioorg. Med. Chem. Lett.* **13**:2925.