



## Product Information Sheet

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Product Name:	HCV NS3/4A protease genotype 1b, Recombinant
Catalog Number:	AS-61017-10
Size:	10 µg
Concentration/Activity:	Provided on the label
Unit definition:	One unit of protease hydrolyzes 1 picomole of 5-FAM/QXL™ FRET substrate (Component A, AnaSpec Cat# 71145) per minute at pH 7.5 at 25°C.
Storage:	Store at -80°C. Avoid multiple thaw-freeze cycles.

### Instruction:

NS3 protease of hepatitis C virus (HCV), located on the N-terminal domain of HCV NS3,<sup>1,2</sup> is responsible for the cleavage at the NS3/NS4A, NS4A/NS4B, NS4B/NS5A, and NS5A/NS5B sites of the nonstructural protein.<sup>3</sup> The HCV NS3 is a chymotrypsin-like serine protease. It requires a cofactor, a 54 amino acid NS4 protein,<sup>4</sup> to reach its optimal activity. The X-ray crystal structure studies show that NS3 forms a tight non-covalent complex with NS4.<sup>4,5</sup> The NS3/4A protease is essential for viral replication and the formation of infectious viral particles, and thus has been considered as one of the most attractive targets for anti-HCV therapy.

The recombinant HCV NS3/4A protease (genotype 1b, strain: HC-J4; NCBI Accession: AF054247) with His-tag was expressed in *E. Coli*. HCV NS3/4A protease is a 217 amino acid fusion protein (22.7 kDa) with NS4A co-factor fused to the N-terminus of NS3 protease domain. Therefore, HCV NS3/4A protease is in active form and the pre-activation by pep4A or pep4AK is not necessary. 5-20 ng of HCV NS3/4A protease is sufficient for FRET-based activity assays (SensoLyte® HCV protease assay kit, AnaSpec Cat#71126, 71145).

The HCV NS3/4A protease is stored in 20 mM Tris-HCl, pH 8.0, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA.

### References

1. R. Bartenschlager, R. et al. *J.Virol.* 67, 3835-3844 (1993).
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3. Landro, JA. et al. *Biochemistry* 36, 9340-9348 (1997).
4. Kim, JL. et al. *Cell* 87, 343-355 (1996).
5. Love, RA. et al. *Cell* 87, 331-342 (1996).

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