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Product Information

Hepatitis C virus core antigen-Fluorescein
recombinant, expressed in *E. coli*

Catalog Number **H7160**
Storage Temperature –20 °C

Product Description

This product is the hepatitis C virus (HCV) core antigen, amino acids 2–192 of the HCV polyprotein, which has been expressed in *E. coli* as a β-galactosidase tagged protein. The fusion protein is then labeled with fluorescein.

The 2–192 region of HCV core antigen represents the viral precursor polyprotein and HCV core nucleocapsid immunodominant region. The HCV core protein is co-translationally inserted into the endoplasmic reticulum membrane.

The HCV core protein is highly basic and acts as a carrier/chaperone for RNA.[1,2] It contains three major domains with particular functions:[2]

- The N-terminal hydrophilic domain of ~120 amino acids (domain D1), a highly basic region with many positively charged amino acids that is involved mainly in RNA binding
- A hydrophobic domain of ~50 amino acids (domain D2), involved in core association with endoplasmic reticulum membranes and with lipid droplets in mammalian cells, and core folding and oligomerization[3]
- A signal peptide, containing the final 20 amino acids, for the downstream protein E1

This product is supplied as a solution at a concentration of ~1 mg/ml in 20 mM Tris-HCl, pH 8.0, containing 1.2 M urea and 10 mM 2-mercaptoethanol. It reacts positively with human HCV serum.

Purity: ≥95% (SDS-PAGE)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

This product ships on dry ice and is stable at –20 °C for at least a year. Upon thawing, store 2–8 °C for one month or as frozen aliquots at –20 °C. Avoid repeated freeze-thaw cycles.

References

1. Cristofari, G. *et al.*, *Nucleic Acids Res.*, **32(8)**, 2623-2531 (2004).
2. Boulant, S. *et al.*, *J. Virol.*, **79(17)**, 11353-11365 (2005).
3. Kunkel, M., and Watowich, S.J., *FEBS Lett.*, **557(1-3)**, 174-180 (2004).

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