DATA SHEET

Jena Bioscience

HAV-P2C-P3B (residues 1492-1606)

Hepatitis A Virus Core Protein P2C-P3B
recombinant, *E. coli*

Cat. No.	Amount
PR-1118	100 µg

For general laboratory use.

Shipping: shipped on gel packs

Storage Conditions: store at -20 °C

Additional Storage Conditions: avoid freeze/thaw cycles

Shelf Life: 12 months

Molecular Weight: 53.7 kDa

Purity: > 90 % (SDS-PAGE)

Form: liquid (Supplied in 10 mM Tris-HCl pH 9.6, 0.1% SDS and 50% glycerol)

Applications:
Recombinant HAV-P2C-P3B may be used in ELISA and Western blots, excellent for detection of HAV with minimal specificity problems.

Description:
The *E. coli* derived 53.7 kDa recombinant protein contains the P2C-P3B immunodominant regions, amino acids 1492-1606. HAV core proteins are purified by proprietary chromatographic techniques.

Background: Forty-two antigenic domains were identified across the hepatitis A virus (HAV) polyprotein by using a set of 237 overlapping 20-mer synthetic peptides spanning the entire HAV polyprotein and a panel of serum samples from acutely HAVinfected patients. The term antigenic domain is used in this study to define a protein region spanned with consecutive overlapping immunoreactive peptides. Nineteen antigenic domains were found within the structural proteins, and 22 were found within the nonstructural proteins, with 1 domain spanning the junction of VP1 and P2A proteins. Five of these domains were considered immunodominant, as judged by both the breadth and the strength of their immunoreactivity. One domain is located within the VP2 protein at position 57-90 aa. A second domain, located at position 767-842 aa, contains the C-terminal part of the VP1 protein and the entire P2A protein. A third domain, located at position 1403-1456 aa, comprises the C-terminal part of the P2C protein and the N-terminal half of the P3A protein. The fourth domain, located at position 1500-1519 aa, includes almost the entire P3B, and the last domain, located at position 1719-1764 aa, contains the C-terminal region of the P3C protein and the N-terminal region of the P3D protein. It is interesting to note that four of the five most immunoreactive domains are derived from small HAV proteins and/or encompass protein cleavage sites separating different HAV proteins.

Specificity: Immunoreactive with sera of HAV-infected individuals.

Selected References:

Kanda *et al.* (2003) Hepatitis A virus VP3 may activate serum response element associated transcription. *Scand. J. Gastroenterol.* **38**:307.

Hu *et al.* (2002) Mutational characteristics in consecutive passage of rapidly replicating variants of hepatitis A virus strain H2 during cell culture adaptation. *World J. Gastroenterol.* **8**:872.

Beneduce *et al.* (1999) Mapping of protein domains of hepatitis A virus 3AB essential for interaction with 3CD and viral RNA. *Virology* **264**:410.

Kusov *et al.* (1999) Improving proteolytic cleavage at the 3A/3B site of the hepatitis A virus polyprotein impairs processing and particle formation, and the impairment can be complemented in trans by 3AB and 3ABC. *J. Virol.* **73**:9867.