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### Hepatitis A Virus VP1 Recombinant VIRAL ANTIGEN

**Catalog Number:** PRP-227  
**Quantity:** 100 micrograms, 500 micrograms, 1 milligram  
**Format:** 10mM CBB, pH9.6, 0.1% SDS and 50% glycerol  
**Host:** *E. coli*

#### **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. 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. Four of the five most immunoreactive domains are derived from small HAV proteins and/or encompass protein cleavage sites separating different HAV proteins.

#### **Specificity and Preparation:**

The *E. coli* derived 48 kDa recombinant protein contains the VP1 immunodominant region (amino acids 502-605). It is immunoreactive with sera HAV-infected individuals. The HAV VP1 protein was purified by proprietary chromatographic techniques. It is >90% pure as determined by PAGE followed by coomassie staining.

#### **Usage and Storage:**

Reported to be effective for ELISA, immunoblotting, and as an excellent antigen for detection of HAV with minimal specificity problems. Protein may be shipped at ambient temperature. Upon arrival, store at -20°C. It is stable for up to five years frozen, one month in solution at room temperature. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

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