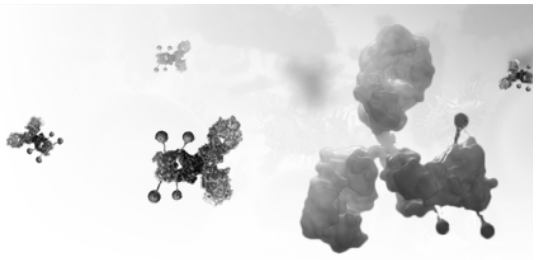

Recombinant HAV VP1-P2A Protein (a.a. 669-782) (DAG1445)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Recombinant HAV VP protein containing amino acids 669-782 was expressed in E. coli and purified by proprietary chromatographic technique.
Antigen Description	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 a.a, 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 a.a, 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.
Species	HAV
Purity	> 90% pure as determined by 10% PAGE (coomassie staining).
Conjugate	Unconjugated
Applications	HAV VP1-P2A antigen is suitable for ELISA and Western blots, excellent antigen for detection of HAV with minimal specificity problems.
Size	100 µg
Buffer	10mM Tris-HCl, pH 9.6, 1.5M urea, 50% glycerol.

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Preservative	None
Storage	2-8°C short term, -20°C long term

BACKGROUND

Introduction	Hepatitis A virus (HAV) is the sole member of the Hepatovirus genus within the family Picornaviridae. The capsid of HAV encloses a single-stranded RNA genome of about 7.5 kb which is translated into a single polyprotein. The virion proteins VP1 to VP4 and the nonstructural proteins are generated from the polyprotein by a cascade of proteolytic cleavages. Only one protease, viral protease 3C, has been implicated in the nine protein scissions. Processing of the capsid protein precursor region generates a unique intermediate, PX (VP1-2A), which accumulates in infected cells and is assumed to serve as precursor to VP1 found in virions, although the details of this reaction have not been determined. Capsid proteins VP1, VP2, and VP3 form a closed capsid enclosing the viral positive strand RNA genome. VP1 is a major viral antigen.
Keywords	HAV P2C-P3A; Hepatitis A VP1-P2A

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