



Recombinant HAV VP4-VP2 Protein (a.a. 55-164) (DAG1451)

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 55-164 was expressed in <i>E. coli</i> 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 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.
Species	HAV
Purity	> 90% pure as determined by 10% PAGE (coomassie staining).
Conjugate	Unconjugated
Applications	HAV VP4-VP2 antigen is suitable for ELISA and Western blots, excellent antigen for detection of HAV with minimal specificity problems.
Size	100 µg
Buffer	10mM CBB, pH9.6, 0.1% SDS and 50% glycerol.

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

BACKGROUND

Introduction Hepatitis A Virus (HAV) is a 27nm nonenveloped, spherical, positive stranded RNA virus, classified within the genus hepatovirus of the picornavirus family and is among the smallest and structurally simplest of the RNA animal viruses. A single large polyprotein is expressed from a large open reading frame extending through most of the genomic RNA. This polyprotein is subsequently cleaved by a viral protease (3Cpro) to form three (possibly four) capsid proteins and several nonstructural proteins. HAV genomic replication occurs exclusively in the cytoplasm of the infected hepatocyte by a mechanism involving an RNA-dependent RNA polymerase.

Keywords HAV; HAV VP2-VP4; Hepatitis A Virus VP2-VP4; Picornaviridae; Hepatovirus; viral protein 2