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Rabbit Anti-Hepatitis A virus polyprotein VP1 antibody

SL6950R

Product Name:	Hepatitis A virus polyprotein VP1
Chinese Name:	甲型肝炎病毒聚蛋白VP1抗体
Alias:	polyprotein; POLG_HAVMB; Genome polyprotein; Protein VP1-2A; Protein VP1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human hepatitis A virus
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	23/38/245kDa
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Hepatitis A virus polyprotein VP1:601-700/2227
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Hepatitis A virus (HAV) is classified with the enterovirus group of the Picornaviridae family. Many other picornaviruses cause human disease, including polioviruses, coxsackieviruses, echoviruses, and rhinoviruses (cold viruses). The term hepatitis A (HA) or type A viral hepatitis has replaced all previous designations: infectious hepatitis, epidemic hepatitis, epidemic jaundice, catarrhal jaundice, infectious icterus,

	Botkins disease, and MS-1 hepatitis. **Function:** Capsid proteins VP1, VP2, and VP3 form a closed capsid enclosing the viral positive strand RNA genome. All these proteins contain a beta-sheet structure called beta-barrel jelly roll. Together they form an icosahedral capsid (T=3) composed of 60 copies of each VP1, VP2, and VP3, with a diameter of approximately 300 Angstroms. VP1 is situated at the 12 fivefold axes, whereas VP2 and VP3 are located at the quasi-sixfold axes. The capsid interacts with HAVCR1 to provide virion attachment to target cell. VP0 precursor is a component of immature procapsids. The N-terminal domain of VP0, protein VP4, is needed for the assembly of 12 pentamers into the icosahedral structure. Unlike other picornaviruses, HAV VP4 does not seem to be myristoylated and has not been detected in mature virions, supposedly owing to its small size. VP1-2A precursor is a component of immature procapsids and corresponds to an extended form of the structural protein VP1. The C-terminal domain of VP1-2A, protein 2A, acts as an assembly signal that allows multimerization of VP1-2A and formation of pentamers of VP1-VP2-VP3 trimers. It is proteolytically removed from the precursor by a host protease and does not seem to be found in mature particles (By similarity). Protein 2B and 2BC precursor affect membrane integrity and cause an increase in membrane permeability (By similarity). Protein 2C associates with and induces structural rearrangements of intracellular membranes. It displays RNA-binding, nucleotide binding and NTPase activities. Protein 3A, via its hydrophobic domain, serves as membrane anchor to the 3AB and 3ABC precursors. The 3AB precursor interacts with the 3CD precursor and with RNA structures found at both the 5'- and 3'-termini of the viral genome. Since the 3AB precursor contains the hydrophobic domain 3A, it probably anchors the whole viral replicase complex to intracellular membranes on which viral RNA synthesis occurs. The 3ABC precursor is targeted to the mitochondrial membrane where protease 3C activity cleaves and inhibits the host antiviral protein MAVS, thereby disrupting activation of IRF3 through the IFIH1/MDA5 pathway. In vivo, the protease activity of 3ABC precursor is more efficient in cleaving the 2BC precursor than that of protein 3C. The 3ABC precursor may therefore play a role in the proteolytic processing of the polyprotein. Protein 3B is covalently linked to the 5'-end of both the positive-strand and negative-strand genomic RNAs. It acts as a genome-linked replication primer (By similarity). Protein 3C is a cysteine protease that generates mature viral proteins from the precursor polyprotein. In addition to its proteolytic activity, it binds to viral RNA, and thus influences viral genome replication. RNA and substrate bind co-operatively to the protease. Also cleaves host proteins such as PCBP2. RNA-directed RNA polymerase 3D-POL replicates genomic and antigenomic RNA by recognizing replications specific signals. **Subunit:** 3AB precursor is a homodimer. 3AB precursor interacts with 3CD precursor. Protein

	3ABC interacts with human MAVS. **Subcellular Location:** Protein VP1: Virion. Host cytoplasm (Potential). Protein VP1-2A: Virion. Host cytoplasm (Potential). **Post-translational modifications:** Specific enzymatic cleavages by the viral protease in vivo yield a variety of precursors and mature proteins. Polyprotein processing intermediates are produced, such as P1-2A which is a functional precursor of the structural proteins, VP0 which is a VP4-VP2 precursor, VP1-2A precursor, 3ABC precursor which is a stable and catalytically active precursor of 3A, 3B and 3C proteins, 3AB and 3CD precursors. The assembly signal 2A is removed from VP1-2A by a host protease. During virion maturation, non-infectious particles are rendered infectious following cleavage of VP0. This maturation cleavage is followed by a conformational change of the particle (By similarity). [PTM] VPg is uridylylated by the polymerase and is covalently linked to the 5'-end of genomic RNA. This uridylylated form acts as a nucleotide-peptide primer for the polymerase (By similarity). **Similarity:** Belongs to the picornaviridae polyprotein family. Contains 1 peptidase C3 domain. Contains 1 RdRp catalytic domain. Contains 1 SF3 helicase domain. **SWISS:** P13901 **Gene ID:** N/A **Database links:** **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.