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Hepatitis C Virus NS5a Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58250

Specification

Hepatitis C Virus NS5a Polyclonal Antibody - Product Information

Application	**E**
Primary Accession	Q14SZ0
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**49 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from Hepatitis C Virus NS5a**
Epitope Specificity	**1973-2070/3010**
Isotype	**IgG**
Purity	
affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Non-structural protein 5A: Host endoplasmic reticulum membrane; Peripheral membrane protein. Host cytoplasm, host perinuclear region. Host mitochondrion. Note=Host membrane insertion occurs after processing by the NS3 protease.**
SIMILARITY	**Belongs to the hepacivirus polyprotein family. Contains 1 helicase ATP-binding domain. Contains 1 peptidase C18 domain. Contains 1 peptidase S29 domain. Contains 1 RdRp catalytic domain.**
SUBUNIT	**Core protein is a homomultimer that binds the C-terminal part of E1 and interacts with numerous cellular proteins. Interaction with human STAT1 SH2 domain seems to result in decreased STAT1 phosphorylation, leading to decreased IFN-stimulated gene transcription. In addition to blocking the formation of phosphorylated STAT1, the core protein also promotes ubiquitin-mediated proteasome-dependent degradation of STAT1. Interacts with, and constitutively activates human STAT3. Associates with human LTBR and TNFRSF1A receptors and possibly induces apoptosis. Binds to human SP110 isoform 3/Sp110b, HNRPK, C1QR1, YWHAE, UBE3A/E6AP, DDX3X, APOA2 and RXRA proteins. Interacts with**

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	human CREB3 nuclear transcription protein, triggering cell transformation. May interact with human p53. Also binds human cytokeratins KRT8, KRT18, KRT19 and VIM (vimentin). E1 and E2 glycoproteins form a heterodimer that binds to human LDLR, CLDN1, CD81 and SCARB1 receptors. E2 binds and inhibits human EIF2AK2/PKR. Also binds human CD209/DC-SIGN and CLEC4M/DC-SIGNR. p7 forms a homoheptamer in vitro. NS2 forms a homodimer containing a pair of composite active sites at the dimerization interface. NS2 seems to interact with all other non-structural (NS) proteins. NS4A interacts with NS3 serine protease and stabilizes its folding. NS3-NS4A complex is essential for the activation of the latter and allows membrane anchorage of NS3. NS3 interacts with human TANK-binding kinase TBK1 and MAVS. NS4B and NS5A form homodimers and seem to interact with all other non-structural (NS) proteins. NS5A also interacts with human EIF2AK2/PKR, FKBP8, GRB2, BIN1, PIK3R1, SRCAP, VAPB and with most Src-family kinases. NS5B is a homooligomer and interacts with human VAPB, HNRNPA1 and SEPT6.
Post-translational modifications	**Specific enzymatic cleavages in vivo yield mature proteins. The structural proteins, core, E1, E2 and p7 are produced by proteolytic processing by host signal peptidases. The core protein is synthesized as a 21 kDa precursor which is retained in the ER membrane through the hydrophobic signal peptide. Cleavage by the signal peptidase releases the 19 kDa mature core protein. The other proteins (p7, NS2-3, NS3, NS4A, NS4B, NS5A and NS5B) are cleaved by the viral proteases. Envelope E1 and E2 glycoproteins are highly N-glycosylated. Core protein is phosphorylated by host PKC and PKA. NS5A is phosphorylated in a basal form termed p56. p58 is an hyperphosphorylated form of p56. p56 and p58 coexist in the cell in roughly equivalent amounts. Hyperphosphorylation is dependent on the presence of NS4A. Human AKT1, RPS6KB1/p70S6K, MAP2K1/MEK1, MAP2K6/MKK6 and CSNK1A1/CKI-alpha kinases may be responsible for NS5A phosphorylation. NS4B is palmitoylated. This modification may play a role in its polymerization or in protein-protein interactions. The**

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N-terminus of a fraction of NS4B molecules seems to be relocated post-translationally from the cytoplasm to the ER lumen, with a 5th transmembrane segment. The C-terminus of NS2 may be lumenal with a fourth transmembrane segment. Core protein is ubiquitinated; mediated by UBE3A and leading to core protein subsequent proteasomal degradation.

Important Note

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Background Descriptions

HCV is classified into the genus Hepacivirus of the family Flaviviridae. Like all the members of the family, HCV is an enveloped, single-stranded, positive-sense RNA virus. Its genome (about 9600 nt) is flanked at both termini by conserved, highly structured non-translated regions (NTRs) and encodes a polyprotein precursor (about 3000 aa), which is proteolytically processed by host and viral proteases to produce the structural (core, E1, E2 and p7) and non-structural (NS2, NS3, NS4A, NS4B, NS5A and NS5B) proteins of the virus. Recently, an additional protein has been identified, whose function remains unknown. NS5A is a ~56 kDa pleiotropic protein with key roles in both viral RNA replication and modulation of the physiology of the host cell. It's exact role is not currently known (2008).

Hepatitis C Virus NS5a Polyclonal Antibody - Additional Information

Dilution

E~~N/A

Storage

Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. 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 ℃.

Hepatitis C Virus NS5a Polyclonal Antibody - Protein Information

Hepatitis C Virus NS5a Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Hepatitis C Virus NS5a Polyclonal Antibody - Images