SANTA CRUZ BIOTECHNOLOGY, INC.

Hep B preS1 (AP1): sc-57761

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hep B (hepatitis B) virus is a member of a member of the Hepadnavirus family that causes an inflammation of the liver, vomiting, jaundice and, sometimes, death. Hep B is one of the small number of known non-retroviral viruses that replicate their genome using reverse transcription. Three major antigens make up different parts of the Hep B virus (HBV). These three include: surface antigen (Hep B sAg, preS1/preS2), an envelope glycoprotein found as membranous aggregates in the sera of individuals infected with HBV; e-antigen (Hep B eAg), which is typically associated with much higher rates of viral replication; and core antigen (Hep B cAg), which encloses the viral genome and makes up the assembled and unassembled variants of the capsid protein. Hep B cAg and Hep B eAg are used primarily in HBV diagnosis, whereas Hep B sAg is used for HBV prevention in vaccines. Hep B viral antigens are primarily expressed in liver.

REFERENCES

1. Bichko, V., et al. 1993. Epitopes recognized by antibodies to denatured core protein of hepatitis B virus. Mol. Immunol. 30: 221-231.
2. Skrivelis, V., et al. 1993. The structure of the variable regions of mouse monoclonal antibodies to hepatitis B virus core antigen. Scand. J. Immunol. 37: 637-643.

SOURCE

Hep B preS1 (AP1) is a mouse monoclonal antibody raised against Hep B preS1.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Hep B preS1 (AP1) is available conjugated to agarose (sc-57761 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-57761 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57761 PE), fluorescein (sc-57761 FITC), Alexa Fluor® 488 (sc-57761 AF488), Alexa Fluor® 546 (sc-57761 AF546), Alexa Fluor® 594 (sc-57761 AF594) or Alexa Fluor® 647 (sc-57761 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-57761 AF680) or Alexa Fluor® 790 (sc-57761 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Hep B preS1 (AP1) is recommended for detection of preS1 region of Hep B origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Hep B preS1: 13 kDa.

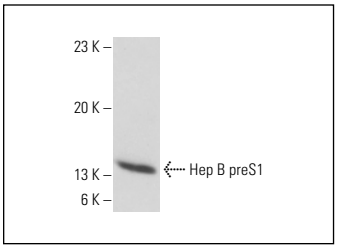
RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Hep B preS1 (AP1): sc-57761. Western blot analysis of recombinant Hep B preS1.

SELECT PRODUCT CITATIONS

1. Amini-Bavil-Olyaee, S., et al. 2010. Differential impact of immune escape mutations G145R and P120T on the replication of lamivudine-resistant hepatitis B virus e antigen-positive and -negative strains. J. Virol. 84: 1026-1033.
2. Li, J., et al. 2013. Exosomes mediate the cell-to-cell transmission of IFN-α-induced antiviral activity. Nat. Immunol. 14: 793-803.
3. Daniel, H.D. and Torbenson, M. 2017. Transgenic hepatitis B: a new model of HBV infection. Sci. Rep. 7: 2610.
4. Inoue, J., et al. 2019. Small interfering RNA screening for the small GTPase Rab proteins identifies Rab5B as a major regulator of hepatitis B virus production. J. Virol. 93: e00621-19.
5. Al Mamun, M.A., et al. 2020. Flavonoids compounds from *Tridax procumbens* inhibit osteoclast differentiation by down-regulating c-Fos activation. J. Cell. Mol. Med. 24: 2542-2551.
6. Zeyen, L., et al. 2020. Hepatitis B virus exploits ERGIC-53 in conjunction with COPII to exit cells. Cells 9: 1889.
7. Shen, Z., et al. 2020. Characterization of IL-21-expressing recombinant hepatitis B virus (HBV) as a therapeutic agent targeting persisting HBV infection. Theranostics 10: 5600-5612.
8. Fang, R., et al. 2022. Ciliatoside A, isolated from *Peristrophe japonica,* inhibits HBsAg expression and cccDNA transcription by inducing autophagy. Antiviral Res. 209: 105482.
9. Lamrayah, M., et al. 2022. Induction of a strong and long-lasting neutralizing immune response by dPreS1-TLR2 agonist nanovaccine against hepatitis B virus. Antiviral Res. 209: 105483.
10. Yato, K., et al. 2023. Identification of neutralizing epitopes in the preS2 domain of the hepatitis B virus. Virus Res. 323: 199014.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.