

Hep B sAg (BID40): sc-57789

BACKGROUND

Hep B (Hepatitis B) virus is a member the Hepadnavirus family that causes an inflammation of the liver, vomiting, jaundice and, sometimes, death. Hep B infection is associated with a 100-fold increased risk of hepatocellular carcinoma and currently infects over 250 million people worldwide. Hep B is one of the small number of known non-retroviral viruses that replicate their genome using reverse transcription. Hep B has a partially double stranded 3.2 kilobase DNA genome which contains four open reading frames, one of which encodes a 154 amino acid protein called the HBx protein. Hep B sAg (Hep B surface antigen) is a protein antigen produced by the Hep B virus. When in the blood, Hep B sAg is one of the earliest markers of infection with Hep B, appearing even before symptoms occur.

REFERENCES

- Aden, D.P., Fogel, A., Plotkin, S., Damjanov, I. and Knowles, B.B. 1980. Controlled synthesis of HBsAg in a differentiated human liver carcinoma-derived cell line. *Nature* 282: 615-616.
- Courouce-Pauty, A.M., Plançon, A. and Soulier, J.P. 1983. Distribution of HBsAg subtypes in the world. *Vox Sang.* 44: 197-211.
- Sun, T.T., Chu, Y.R., Ni, Z.Q., Lu, J.H., Huang, F., Ni, Z.P., Pei, X.F., Yu, Z.I. and Liu, G.T. 1986. A pilot study on universal immunization of newborn infants in an area of hepatitis B virus and primary hepatocellular carcinoma prevalence with a low dose of hepatitis B vaccine. *J. Cell. Physiol. Suppl.* 4: 83-90.
- Samuel, D., Bismuth, A., Mathieu, D., Arulnaden, J.L., Reynes, M., Benhamou, J.P., Brechot, C. and Bismuth, H. 1991. Passive immunoprophylaxis after liver transplantation in HBsAg-positive patients. *Lancet* 337: 813-815.
- Liaw, Y.F., Sheen, I.S., Chen, T.J., Chu, C.M. and Pao, C.C. 1991. Incidence, determinants and significance of delayed clearance of serum HBsAg in chronic hepatitis B virus infection: a prospective study. *Hepatology* 13: 627-631.
- McMahon, G., Ehrlich, P.H., Moustafa, Z.A., McCarthy, L.A., Dottavio, D., Tolpin, M.D., Nadler, P.I. and Ostberg, L. 1992. Genetic alterations in the gene encoding the major HBsAg: DNA and immunological analysis of recurrent HBsAg derived from monoclonal antibody-treated liver transplant patients. *Hepatology* 15: 757-766.
- Wachs, M.E., Amend, W.J., Ascher, N.L., Bretan, P.N., Emond, J., Lake, J.R., Melzer, J.S., Roberts, J.P., Tomlanovich, S.J. and Vincenti, F. 1995. The risk of transmission of hepatitis B from HBsAg⁻, HBcAb⁺, HBIgM⁻ organ donors. *Transplantation* 59: 230-234.
- Chisari, F.V. and Ferrari, C. 1995. Hepatitis B virus immunopathogenesis. *Annu. Rev. Immunol.* 13: 29-60.
- Waters, J.A., Bailey, C., Love, C. and Thomas, H.C. 1998. A study of the antigenicity and immunogenicity of a new hepatitis B vaccine using a panel of monoclonal antibodies. *J. Med. Virol.* 54: 1-6.

SOURCE

Hep B sAg (BID40) is a mouse monoclonal antibody raised against Hep B sAg.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Hep B sAg (BID40) is recommended for detection of ad and ay subtype of surface antigen of Hep B origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Hep B sAg: 28 kDa.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



See **Hep B sAg (1023): sc-53299** for Hep B sAg antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.