

Hep B sAg (B82.1): sc-57788

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

1. 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.
2. Courouce-Pauty, A.M., Plançon, A. and Soulier, J.P. 1983. Distribution of HBsAg subtypes in the world. *Vox Sang.* 44: 197-211.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. Chisari, F.V. and Ferrari, C. 1995. Hepatitis B virus immunopathogenesis. *Annu. Rev. Immunol.* 13: 29-60.
9. 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.

RESEARCH USE

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

SOURCE

Hep B sAg (B82.1) is a mouse monoclonal antibody raised against Hep B sAg isolated from sera of human origin.

PRODUCT

Each vial contains 500 μ l culture supernatant containing IgG_{2b} with < 0.1% sodium azide.

APPLICATIONS

Hep B sAg (B82.1) is recommended for detection of ad and ay subtype of surface antigen of Hep B origin by immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Molecular Weight of Hep B sAg: 28 kDa.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.