

# Hep B sAg (HB5): sc-51609

## 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. 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.
4. 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.
5. 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.
6. 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<sup>+</sup>, HBcAb<sup>+</sup>, HBIgM<sup>-</sup> organ donors. *Transplantation* 59: 230-234.
7. Chisari, F.V. and Ferrari, C. 1995. Hepatitis B virus immunopathogenesis. *Annu. Rev. Immunol.* 13: 29-60.

## SOURCE

Hep B sAg (HB5) is a mouse monoclonal antibody raised against purified Hep B sAg isolated from plasma of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

Hep B sAg (HB5) is recommended for detection of subtypes ayw2, ayw3, ayw4, ayr, adw2, adw4, adrq<sup>+</sup>, adrq<sup>-</sup> of Hep B origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

## PROTOCOLS

See our web site at [www.scbt.com](http://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<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.