



Hep B eAg (HBe5): sc-51935

BACKGROUND

The "core" ORF of the hepatitis B genome encodes two related yet functionally distinct proteins: the hepatitis B core protein, a major component of the nucleocapsid, and the hepatitis B e-antigen (HBeAg), a secreted protein. The HBeAg gene, so named due to its early appearance during acute HB infection, encodes a hydrophobic transmembrane domain, resulting in translation/translocation of HBeAg to the lumen of the ER. There, a signal peptidase removes 19 of the 29 residues of HBeAg, preventing it from forming into core particles. The presence of HBeAg in serum indicates active viral replication in hepatocytes, and associates with an increased risk of hepatocellular carcinoma.

REFERENCES

1. Bruss, V., et al. 1988. Formation of transmembranous hepatitis B e-antigen by cotranslational *in vitro* processing of the viral precore protein. *Virology* 163: 268-275.
2. Wasenauer, G., et al. 1992. A cysteine and a hydrophobic sequence in the noncleaved portion of the pre-C leader peptide determine the biophysical properties of the secretory core protein (HBe protein) of human hepatitis B virus. *J. Virol.* 66: 5338-5346.
3. Yang, H.I., et al. 2002. Hepatitis B e-antigen and the risk of hepatocellular carcinoma. *N. Engl. J. Med.* 347: 168-174.
4. Andreone, P., et al. 2004. High risk of hepatocellular carcinoma in anti-HBe positive liver cirrhosis patients developing lamivudine resistance. *J. Viral Hepat.* 11: 439-442.
5. Chen, M.T., et al. 2004. A function of the hepatitis B virus precore protein is to regulate the immune response to the core antigen. *Proc. Natl. Acad. Sci. USA* 101: 14913-14918.
6. Tran, T.T., et al. 2004. Hepatitis B: epidemiology and natural history. *Clin. Liver Dis* 8: 255-266.
7. Wai, C.T., et al. 2004. Clinical significance of hepatitis B virus genotypes, variants, and mutants. *Clin. Liver Dis* 8: 321-352.
8. Baumert, T.F., et al. 2005. Genetic variants of hepatitis B virus and their clinical relevance. *Minerva Gastroenterol. Dietol.* 51: 95-108.

SOURCE

Hep B eAg (HBe5) is a mouse monoclonal antibody raised against recombinant Hep B eAg.

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 eAg (HBe5) is recommended for detection of e-antigen of Hep B by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Hep B eAg: 15 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.