

# Hep B eAg (vC-20): sc-28036

## BACKGROUND

The "core" ORF of the Hep B (Hepatitis B) genome encodes two related yet functionally distinct proteins: the Hep B core protein, a major component of the nucleocapsid, and the Hep B eAg, a secreted protein. The Hep B eAg gene, so named due to its early appearance during acute Hep B infection, encodes a hydrophobic transmembrane domain, resulting in translation/translocation of Hep B eAg to the lumen of the ER. There, a signal peptidase removes 19 of the 29 residues of Hep B eAg, preventing it from forming into core particles. The presence of Hep B eAg 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 (vC-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of the e-antigen of Hep B origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-28036 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

Hep B eAg (vC-20) is recommended for detection of e-antigen of Hep B origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Hep B eAg: 15 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

## 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) or our catalog for detailed protocols and support products.


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