RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Goat anti Hepatitis B Surface Antigen (ad/ay), unconjugated

Catalog No.	**Species**	**Isotype**
MD-05-0191	Virus	Goat IgG

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.

Applications

Table Summary of antibody applications and working conditions

Options / Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA	.			
Western Blotting			.	
Immunohistology			.	
Immunoblotting			.	
conjugation	.			
Immunofluorence staining			.	
Neutralization			.	

Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application.

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Specificity

Monospecific to purified surface antigen HBsAg.

Preparation

Goat antibody to hepatitis B surface antigen (HBsAg), ad/ay subtypes. Immunogen is mixture of subtypes ad & ay Hepatitis B surface antigen purified from human serum. This antibody is prepared by sodium sulfate precipitation and ion-exchange chromatography.

Formulation

4-5mg/ml (OD280nm, E0.1% = 1.4) purified liquid in 0.01M PBS, pH 7.2 with 0.1% sodium azide.

Purification

>95% pure.

Storage

Centrifuge before opening to ensure complete recovery of vial contents.

Short term (up to 6 months) stores at 2-8°C. Long term, aliquot and store at –20°C. **Avoid multiple freeze/thaw cycles.**

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.
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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-HBepositive liver cirrhosis patients developing lamivudine resistance. J. Viral Hepat. 11: 439-442.