



## RayBiotech, Inc.

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### Certificate of Analysis and Data Sheet Mouse anti Hepatitis B 'e' Antigen

**Catalog No.**  
MD-05-0178

**Species**  
Virus

**Isotype**  
Mouse IgG2a

#### 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**

<b>Options</b> <b>Functions</b>	<b>YES</b>	<b>NO</b>	<b>Not determined</b>	<b>Recommended Work dilution or concentration</b>
ELISA	.			
Western Blotting			.	
Immunohistology			.	
Immunoblotting			.	
EIA			.	
Immunofluorescence staining			.	
Neutralization			.	

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

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### **Preparation**

Mouse monoclonal antibody to hepatitis B 'e' antigen (HBeAg). Immunogen is recombinant HBeAg. This antibody was prepared from mouse ascites, followed by Protein A chromatography.

### **Specificity**

This antibody is specific for the 'e' antigen of Hepatitis B Virus.

### **Formulation**

0.1mg/ml in 0.01M PBS, pH 7.2 with 0.1% Sodium azide.

### **Purification**

>90% pure.

### **Storage**

Centrifuge before opening to ensure complete recovery of vial contents.

Upon receipt, 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.
- 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.

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