

Antibody Datasheet

Product Name:	Mouse anti Hepatitis B virus e antigen
Clone number:	1893
Isotype:	Mouse IgG2a
Product code:	MAB12227-100
Batch Number:	
Amount:	100ug
Concentration:	1 mg/ml
Buffer:	Phosphate Buffered Saline pH7.4
Preservative:	0.09% Sodium Azide (NaN ₃)
Purification:	The antibody was purified by affinity chromatography on protein A
Specificity:	This antibody is specific for Hepatitis B virus e antigen.
Applications:	ELISA. The antibody is suitable as a detection antibody for use with clone 1892 (MAB12226) in ELISA assays.
Secondary reagents:	Goat anti mouse IgG:HRP (PAB21441HRP)

Antigen background: Hepatitis B virus (HBV) is a small, partially double-stranded DNA virus that belongs to the genus *Orthohepadnaviruses* of the *Hepadnaviridae* family of viruses. Currently, eight genotypes of HBV are recognised, designated A-H, with each genotype having a distinct geographical distribution. HBV is a retrovirus that replicates by reverse transcription of an RNA intermediate. The HBV genome encodes several structural and non-structural proteins including preCore, core, pol, X (HBx), and envelope proteins L, M and S ([Liang, TJ](#)). Hepatitis B virus (HBV) expresses two structural forms of the nucleoprotein, the intracellular nucleocapsid (hepatitis core antigen, HBcAg)



and the secreted nonparticulate form (hepatitis e antigen, HBeAg). The presence of HBeAg in the serum of infected patients is an indicator of active viral replication and disease progression ([Tong, S et al](#)).

First recognised in the 1940s as an infectious agent causing hepatitis, the HBV virus was eventually identified in the mid-1960's when HBV particles were detected in a patient's serum. The particles, initially referred to as Australia antigen, were subsequently found to be HBV envelope proteins L, S and M. Collectively these particles are now known as hepatitis B surface antigen (HBsAg) ([Seeger, C](#)).

HBV is a bloodborne virus that is transmitted through contact with infected blood or bodily fluids. HBV infection may occur through various routes including the sharing of needles for injecting drugs, the use of inadequately sterilised medical equipment infected with HBV and the transfusion of unscreened blood and blood products. In endemic areas, perinatal transmission of HBV from mother to child is common.

HBV infection causes liver disease which can vary from acute, or chronic hepatitis to cirrhosis of the liver and potentially hepatocellular carcinoma. The incubation of HBV infection can vary from 1 – 6 months. During the period of acute infection, most individuals remain asymptomatic. However, some patients develop acute illness presenting with clinical symptoms that include jaundice, nausea, vomiting, abdominal pain and extreme fatigue. Acute liver failure may occur in 1% of patients, which can be fatal. HBV infected patients may also develop chronic lifelong disease, which can progress to cirrhosis or hepatocellular carcinoma in 20-30% of adult cases ([WHO](#)).

The asymptomatic nature of HBV infection, and the similarity of clinical symptoms to other types of hepatitis virus infection makes clinical diagnosis difficult. Therefore, laboratory diagnosis is undertaken using serological and molecular methods to detect HBsAg and specific IgM antibodies recognising core antigen HbcAg.

References:

Liang TJ. 2009. Hepatitis B: the virus and disease. *Hepatology*. May;49(5 Suppl): S13-21

Tong S et. al. 2005. Hepatitis B Virus e Antigen Variants. *Int J Med Sci*. 2(1):2-7.

Seeger C, Mason WS. 2015. Molecular biology of hepatitis B virus infection. *Virology*. May;479-480:672-86.

World health Organization: Factsheet, Hepatitis B

Storage:

Store at +4⁰C for up to three months, or at -20⁰C for longer.

The Antibody is shipped at ambient temperature.
Avoid repeated freeze/thaw cycles.

