

Cat # AB-15010

Mouse Anti-Hepatitis B Virus (AD & AY Antigens) IgG

Size: 100 ug

Hepatitis B virus, abbreviated HBV, is a species of the genus *Orthohepadnavirus*, which is likewise a part of the *Hepadnaviridae* family of viruses. This virus causes the disease hepatitis B. It is one of the few known non-retroviral viruses which employ reverse transcription as a part of its replication process.

The virus particle consists of an outer lipid envelope and an icosahedral nucleocapsid core composed of protein. The nucleocapsid encloses the viral DNA and a DNA polymerase that has reverse transcriptase activity. The outer envelope contains embedded proteins which are involved in viral binding of, and entry into, susceptible cells. The virus is one of the smallest enveloped animal viruses with a virion diameter of 42 nm. The virus is divided into four major serotypes (adr, adw, ayr, ayw) based on antigenic epitopes present on its envelope proteins, and into eight genotypes (A–H) according to overall nucleotide sequence variation of the genome. The genotypes have a distinct geographical distribution and are used in tracing the evolution and transmission of the virus. Differences between genotypes affect the disease severity, course and likelihood of complications, and response to treatment and possibly vaccination

HBV invades the cell by binding to surface receptor and become internalized. The viral core particles then migrate to the hepatocyte nucleus and the partially double-stranded, relaxed circular genomes (RCDNA) are repaired to form a covalently closed circular DNA (cccDNA), which is the template for viral genomic and sub-genomic RNAs by cellular RNA polymerase II. Of these, the pregenomic RNA (pgRNA) is selectively packaged into progeny capsids and is then reverse-transcribed into new RC-DNA. The core can either bud into the endoplasmic reticulum to be enveloped or exported from the cell or recycled back into the genome for conversion to ccc DNA.

Hepatitis B vaccine is a vaccine developed for the prevention of hepatitis B virus infection. A range of vaccines is available in the market. Presently recombinant DNA vaccines are available. The common brands available are Recombivax HB (Merck), Engerix-B (GSK), Elovac B (Human Biologicals Institute, a division of Indian Immunologicals Limited), Genevac B (Serum Institute), Shanvac B, etc. These vaccines are given intramuscularly.

Source of Antigen and Antibodies

Antigen	Recombinant .Hep B vaccine (BTG)
Ab Host/type	Mouse isotype: IgG1, purified by ion exchange. Supplied In PBS containing 0.05% sodium azide
2-ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Isotype Controls

20102-101	Mouse IgG1 isotype control, purified
20102-101-APC	Mouse IgG1-APC conjugate (isotype)
20102-101-B	Mouse IgG1-Biotin conjugate (isotype)
20102-101-F	Mouse IgG1-FITC conjugate (isotype)
20102-101-FP	Mouse IgG1-FITC-PE conjugate (isotype)
20102-101-HP	Mouse IgG1-HRP conjugate (isotype)
20102-101-PC5	Mouse IgG1-PE-Cy5 conjugate (isotype)
20102-101-PE	Mouse IgG1-PE conjugate (isotype control)

Shipping:

Antibody is shipped lyophilized at room temperature or in solution at 4oC.

Storage:

In lyophilized form, for long periods, store at 4oC in a dry environment. After reconstitution, if not intended for use within a month, aliquot and store at -20oC.

Reconstitution:

Reconstitute with H2O. Mix gently, wash the sides of the vial and wait 30-60 seconds before use.

Stability / Shelf Life: Two years lyophilized, one month in solution at 4°C.

Applications:

ELISA (against r.hepatitis vaccine), 1:10,000 dilution will yield 0.5 O.D using alkaline phosphatase conjugated rabbit anti-mouse Ig

Specificity: This antibody recognizes both the AD and the AY antigens

Usage:

This item is for LABORATORY ESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals

Reference: Hassan MM (2008) J. Clin. Oncol. 26 (28): 4557–62; Schwalbe M (2008) Nucleic Acids Res. 36 (5): 1681–9.

Related items:

AB-15010	Mouse Anti Hepatitis B Virus (AD & AY Antigens) IgG
AB-16310	Anti-Hepatitis B Surface Antigen A (HBsAg) IgG
HBSAG15-N	Hepatitis B surface Antigen (HBsAg) - Ay (High Pure)
HBSAG17-N	Hepatitis B surface Antigen (HBsAg) - Ad (Partially Pure)
HBSAG18-N	Hepatitis B surface Antigen (HBsAg) - Ad (High Pure)
RP-445	Recombinant (yeast) Hepatitis B Surface Antigen ayw subtype, Saccharomyces
RP-446	Recombinant (E.Coli) Hepatitis B Surface Antigen preS1
RP-447	Recombinant (yeast) Hepatitis B Surface Antigen Adw subtype
RP-448	Recombinant (yeast) Hepatitis B Surface Antigen adr subtype, Saccharomyces
RP-449	Recombinant Hepatitis B Surface Antigen preS2
RP-450	Recombinant (CHO cells) Hepatitis B Surface Antigen adr subtype, CHO
RP-451	Recombinant Hepatitis B Surface Antigen ayw subtype, pichia

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