



Anti-HBV Core Protein Monoclonal antibody, Clone BCN132 (DCABH-390)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Mouse monoclonal to Hepatitis B Virus Core Antigen
Antigen Description	Hepatitis B Virus Core Antigen (HBcAg) is part of the infectious virion containing an inner "core particle" enclosing the viral genome. The icosahedral core particle contains 180 or 240 copies of the core protein. HBcAg is one of the three major clinical antigens of hepatitis B virus but disappears early in the course of infection. The hepatitis B virus core antigen (HBcAg) is a highly immunogenic subviral particle and functions as both a T-cell-dependent and a T-cell-independent antigen. Therefore, HBcAg may be a promising candidate target for therapeutic vaccine control of chronic HBV infection.
Specificity	No cross reaction was found with HBeAg, HBsAg, HCV and AFP.
Target	HBV Core Protein
Immunogen	Recombinant Hepatitis B Virus Core Antigen.
Isotype	IgG2b
Source/Host	Mouse
Species Reactivity	HBV
Clone	BCN132
Purity	Protein A purified
Purification	>90%.
Conjugate	Unconjugated
Applications	ELISA, RIA, Flow Cyt

Positive Control	Hepatitis B Virus Core Antigen positive samples.
Format	Liquid
Size	100 µg
Buffer	Preservative: 0.05% Proclin; Constituents: PBS, BSA. Note: pH7.2-7.4
Preservative	None
Storage	store at -20°C. Avoid freeze / thaw cycles.
Ship	Shipped at 4°C.

BACKGROUND

Introduction

Hepatitis B is a DNA Virus of the hepadnaviridae family of viruses. It replicates within infected liver cells (hepatocytes). Hepatitis B Virus (HBV) infection induces a disease state which manifests itself in a variety of ways, characterized by the extent of liver damage, inflammation and viral persistence. HBV infection is also associated with a 100 fold increased risk of hepatocellular carcinoma and currently infects over 250 million people worldwide. HBV has a partially double stranded 3.2 kilobase DNA genome which contains four open reading frames. One of these encodes a 154 amino acid protein called the HBx protein. HBx has been shown to be a transcriptional transactivator of both viral and cellular promoters. Lacking a DNA binding domain and nuclear localization signal, HBx is believed to exert transcriptional activity through protein protein interaction. Its genome consists of partially double stranded circular DNA. The DNA is enclosed in a nucleocapsid, or core antigen (HBcAg), which is surrounded by a spherical envelope (surface antigen or HBsAg). The core antigen shares its sequences with the e antigen (HBeAg) but no cross reactivity between the two proteins has been observed. The HBV genome also encodes a DNA polymerase that also acts as a reverse transcriptase. Hepatitis B infection is normally diagnosed from serological tests that detect HBsAg but as the disease progresses this antigen may no longer be present in the blood and tests for HBcAg are used. If HBsAg can be detected in the blood for longer than six months, chronic hepatitis B is diagnosed. The antigenic determinant of the protein moiety of the HBsAg determines specific characteristics of different serotypes and provides the basis of immunodetection. HBsAg has antigenic heterogeneity, specifically, two pairs of sub specific determinants, d/y and w/r allow the following combinations: adw, ayw, adr, ayr.

Keywords

C; Capsid protein; Core and e antigen; Core antigen; Core antigen; Core protein; HBc; HBcAg; HBVgp4; Hepatitis B Virus core antigen; p21.5; precore/core protein