

HBVsAg-adr Hepatitis B Virus Surface Antigen, *adr* subtype recombinant, *S. cerevisiae*

Cat. No.	Amount
PR-1127	50 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 10 mM phosphate, 145 mM NaCl and 0.1% NaN₃.

Application

Antigen in ELISA, Immunochromatography and monoclonal antibody production.

Specificity

Immunoreactive with sera of HBV-infected individuals.

Molecular Weight

24 kDa

Purity

>95% by SDS-PAGE and RP-HPLC

Description

Recombinant HBsAg-adr full length monomeric protein contains 227 amino acids of the S-gene and has a molecular weight of 24 kDa. Small amounts of dimer and trimer forms also exist in the solution. The protein contains the Hepatitis B Virus Surface Antigen immunodominant region and is purified by proprietary chromatographic techniques.

Background

Hepatitis B virus (HBV) is a small enveloped virus that belongs to the hepadnavirus family.

The genome of the hepatitis B virus (HBV), a partially doublestranded circular DNA, has four known genes encoding the viral surface proteins (pre-S 1, pre-S2 and HBsAg), the precore (pre-C) and core (C) proteins (HBcAg and HBcAg), the DNA polymerase, the X protein.

There are distinct subtypes of HBV indicative of strain heterogeneity. The subtypes are distinguished by antigenic determinants on the surface antigen (HBsAg) and their corresponding antibodies. There is a common group determinant, a, which appears in all HBsAg specimens. There are two sets of subdeterminants, d or y and w or r, which appear to be allelic or mutually exclusive and which are used for the identification of subtypes. Thus, there are at least four major groups into which HBsAg can be classified: *adw*, *adr*, *ayw*, and *ayr*.

Selected References:

- Wai-Kuo Shih *et al.* (1991) Strain Analysis of Hepatitis B Virus on the Basis of Restriction Endonuclease Analysis of Polymerase Chain Reaction Products. *J. Clin. Microbiol.* **29**:1640.
Hu *et al.* (2001) Establishment of transgenic mouse harboring hepatitis B virus (*adr* subtype) genomes. *World J. Gastroenterol.* **7**:111.
Fowler *et al.* (1986) Cloning and analysis of integrated hepatitis B virus DNA of the *adr* subtype derived from a human primary liver cell carcinoma. *J. Gen. Virol.* **67**:771.