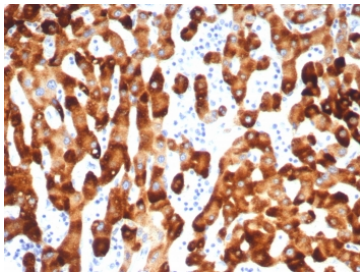
HBsAg Antibody / Hepatitis B surface antigen [clone HBsAg/7556R] (V5317)

Catalog No.	Formulation	Size
V5317-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5317-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5317SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

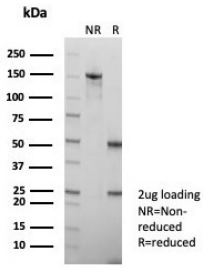
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	HBsAg/7556R
Purity	Protein A/G affinity
UniProt	P03138
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This HBsAg antibody is available for research use only.



IHC staining of FFPE human HBV-infected liver with HBsAg antibody (clone HBsAG/7666R). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free HBsAg antibody (clone HBsAG/7666R) as confirmation of integrity and purity.

Description

HBsAg antibody (clone HBsAg/7556R) detects Hepatitis B surface antigen (HBsAg), a viral envelope glycoprotein forming the outer coat of the Hepatitis B virus (HBV). The UniProt recommended name is Hepatitis B virus surface antigen (S protein). HBsAg is the primary serological marker for HBV infection and plays a central role in viral assembly, infectivity, and immune recognition. It forms part of the viral envelope along with small (S), middle (M), and large (L) surface proteins encoded by the S gene, all sharing overlapping reading frames. These proteins contribute to viral entry into hepatocytes and are essential for the production of infectious virions and noninfectious subviral particles.

During HBV replication, HBsAg is synthesized in excess relative to viral DNA and secreted into the bloodstream as spherical and filamentous subviral particles. These noninfectious particles lack viral nucleocapsid and DNA but are highly immunogenic, eliciting strong antibody responses. The presence of HBsAg in serum is the earliest detectable sign of acute infection and may persist in chronic carriers. Clearance of HBsAg typically signifies recovery and the establishment of protective immunity. Because of its diagnostic and immunological relevance, HBsAg serves as a cornerstone marker in clinical virology and vaccine design.

Structurally, HBsAg contains transmembrane domains and external antigenic loops that display the major 'a' determinant responsible for eliciting neutralizing antibodies. This determinant is conserved across all HBV genotypes, forming the basis of protective immunity following natural infection or vaccination. HBsAg self-assembles within the endoplasmic reticulum, where it undergoes glycosylation and disulfide bonding before secretion. Mutations within the 'a' determinant or surrounding regions can alter antigenicity, contributing to immune escape or diagnostic variability in chronic infection.

Expression of HBsAg is confined to hepatocytes during active infection. It can also be found in serum, liver tissue, and in recombinant systems used for vaccine antigen production. Quantitative monitoring of HBsAg levels provides insights into viral replication dynamics and immune control. In vaccinated individuals, anti-HBs antibodies neutralize HBsAg, preventing viral attachment and entry into hepatocytes. Persistent HBsAg expression, by contrast, indicates ongoing viral transcription and incomplete immune clearance.

Clone HBsAg/7556R is a recombinant monoclonal antibody designed for specific detection of Hepatitis B surface antigen in biological samples. It recognizes conformational epitopes of HBsAg, enabling detection of both virion-associated and subviral forms. The recombinant format ensures high lot-to-lot consistency and strong reactivity under standard research conditions. This antibody provides a reliable tool for studying HBV infection biology, vaccine antigen expression, and host immune response mechanisms. It can be applied in assays evaluating viral replication, antigen presentation, or antiviral drug effects in model systems.

HBsAg antibody (clone HBsAg/7556R) is suitable for detecting Hepatitis B surface antigen in research related to virology, immunology, and vaccine development. NSJ Bioreagents provides HBsAg antibody (clone HBsAg/7556R) validated for use in relevant research applications supporting studies of HBV biology, immune recognition, and diagnostic marker development.

Application Notes

Optimal dilution of the HBsAg antibody should be determined by the researcher.

Immunogen

Recombinant full-length human HBsAg protein was used as the immunogen for the HBsAg antibody.

Storage

Aliquot the HBsAg antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Copyright © NSJ Bioreagents. All rights reserved.