Hepatitis B surface antigen Antibody / HBsAg [clone HBsAg/7555R] (V5316)

Catalog No.	Formulation	Size
V5316-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5316-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5316SAF-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/7555R
Purity	Protein A/G affinity
UniProt	P03138
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Hepatitis B surface antigen antibody is available for research use only.

Description

Hepatitis B surface antigen antibody (clone HBsAg/7555R) detects HBsAg, the envelope glycoprotein that forms the outer shell of the Hepatitis B virus (HBV). The UniProt recommended name is Hepatitis B virus surface antigen (S protein).

HBsAg is the primary antigenic determinant of HBV and a key indicator of active infection. It plays a critical role in viral attachment, entry, and immune recognition, forming both infectious virions and abundant noninfectious subviral particles secreted by infected hepatocytes.

The HBV S gene encodes three co-linear surface proteins-small (S), middle (M), and large (L)-which differ in size due to alternate start codons but share overlapping sequences. These proteins integrate into the viral membrane and endoplasmic reticulum-derived vesicles. Excess synthesis of HBsAg leads to the production of spherical and filamentous particles that circulate in blood during infection. Detection of HBsAg is used clinically as an early marker of acute infection and, when persistent, as evidence of chronic carriage. Clearance of this antigen typically indicates recovery and immune control of the virus.

Structurally, HBsAg contains hydrophobic transmembrane regions and surface-exposed loops bearing the conserved 'a' determinant, the major neutralizing epitope targeted by protective antibodies. Proper folding and glycosylation of HBsAg are essential for its immunogenicity and secretion. Mutations within or near the 'a' determinant can modify antigenicity and are associated with vaccine escape variants and diagnostic challenges. Understanding these molecular features has been vital for vaccine design and for monitoring global HBV genotype variation.

Within infected hepatocytes, HBsAg accumulates in the endoplasmic reticulum and is secreted via vesicular pathways into the bloodstream. It elicits strong humoral immune responses, and antibodies generated against it (anti-HBs) confer protective immunity. HBsAg is also used as a recombinant immunogen in licensed HBV vaccines, where its expression in yeast or mammalian systems produces immunogenic subviral particles free of infectious material.

Clone HBsAg/7555R is a recombinant monoclonal antibody designed for reliable detection of Hepatitis B surface antigen in research applications. It recognizes conformationally intact HBsAg and provides sensitive detection of both virion-associated and subviral forms. The recombinant design ensures lot-to-lot reproducibility and consistent assay performance. This antibody is useful for studying viral antigen expression, vaccine antigen production, or immune response dynamics in HBV-related investigations.

Hepatitis B surface antigen antibody (clone HBsAg/7555R) is suitable for detecting HBsAg expression in hepatocyte cultures, recombinant systems, and model tissues used in HBV research. NSJ Bioreagents provides Hepatitis B surface antigen antibody (clone HBsAg/7555R) validated for use in relevant research applications supporting studies in virology, immunogenicity, and viral antigen characterization.

Application Notes

Optimal dilution of the Hepatitis B surface antigen antibody should be determined by the researcher.

Immunogen

Recombinant full-length human HBsAg protein was used as the immunogen for the Hepatitis B surface antigen antibody.

Storage

Aliquot the Hepatitis B surface antigen antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.