SunLong Biotech Co.,LTD
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[Primary Antibody]

Goat Anti-HBsAg antibody

Catalog Number: SL1557G

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Goat
Isotype:	IgG
Clonality:	Polyclonal
Target:	HBsAg
Immunogen:	Recombinant HBsAg protein
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	HBV1M PBS(pH7.4) with HBV3% Proclin300. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB (1:500-2000) ELISA (1:5000-10000) Not yet tested in other applications. Optimal working dilutions must be determined by the end user.
Reactivity:	HBV
Predicted MW.:	44kDa
Subcellular Location:	The cell membrane
Background:	Hepatitis B Virus (HBV) infection induces a disease state characterised by liver damage, inflammation and viral persistence. Infection also increases the risk of hepatocellular carcinoma. HBV belongs to the Hepadnaviridae family of viruses. 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

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	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. **Function:** The large envelope protein exists in two topological conformations, one which is termed 'external' or Le-HBsAg and the other 'internal' or Li-HBsAg. In its external conformation the protein attaches the virus to cell receptors and thereby initiating infection. This interaction determines the species specificity and liver tropism. This attachment induces virion internalization predominantly through caveolin-mediated endocytosis. The large envelope protein also assumes fusion between virion membrane and endosomal membrane (Probable). In its internal conformation the protein plays a role in virion morphogenesis and mediates the contact with the nucleocapsid like a matrix protein. The middle envelope protein plays an important role in the budding of the virion. It is involved in the induction of budding in a nucleocapsid independent way. In this process the majority of envelope proteins bud to form subviral lipoprotein particles of 22 nm of diameter that do not contain a nucleocapsid. **Subunit:** Li-HBsAg interacts with capsid protein and with HDV Large delta antigen. Isoform M associates with host chaperone CANX through its pre-S2 N glycan. This association may be essential for M proper secretion. **Subcellular Location:** Virion membrane. **Post-translational modifications:** Isoform M is N-terminaly acetylated at a ratio of 90%, and N-glycosylated at the pre-S2 region. Myristoylated. **Similarity:** Belongs to the orthohepadnavirus major surface antigen family. **Database links:** **Entrez Gene:** 2828293 Hepatitis B virus **Entrez Gene:** 944569 Hepatitis B virus **SwissProt:** P03138 Hepatitis B virus **SwissProt:** P03140 Hepatitis B virus **SwissProt:** P03141 Hepatitis B virus **SwissProt:** Q81157 Hepatitis B virus **SwissProt:** Q81158 Hepatitis B virus **SwissProt:** Q81159 Hepatitis B virus **SwissProt:** Q81160 Hepatitis B virus

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[VALIDATION IMAGES]

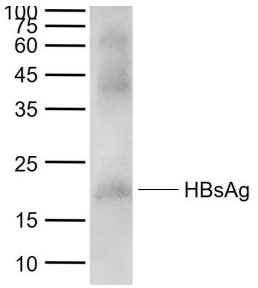


Figure 1. Sample: Lane 1: Recombinant HBsAg protein(SL41420P) Primary: Anti-HBsAg (SL1557G) at 1/1000 dilution Secondary: IRDye800CW Donkey anti-Goat IgG at 1/20000 dilution Predicted band size: 44 kDa Observed band size: 20 kDa

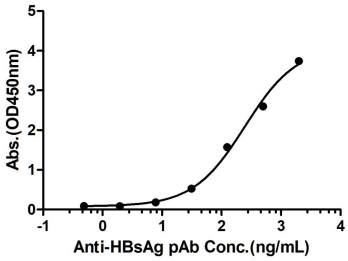


Figure 2. Measured by its binding ability in a indirect ELISA. Immobilized Human HBsAg protein, Tag free(Cat. SL41420P) at 2 μg/mL (100 μL/well) can bind Goat Anti-Human HBsAg Antibody, the EC50 is 248.3 ng/mL

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