

## HBsAg L-protein-ST type

Recombinant HBsAg (L-protein) with high Pre-S1 and Pre-S2 antigen activity

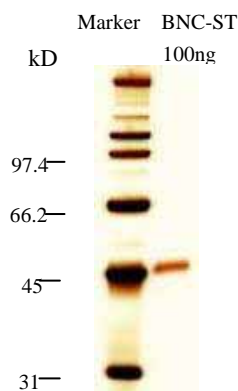
Product # : BCL-AGS-02, BCL-AGS-20

Hepatitis B virus (HBV) expresses three types of surface antigens, i.e. S-, M-, and L-protein. L-protein is composed of S-, Pre-S2, and Pre-S1 region. The deletion of Pre-S1 region forms M-protein and further deletion of Pre-S2 region results in S-protein. Most of commercially available HBsAg is composed of either S-protein alone or a mixture of S- and M-proteins. HBV-infected patients generally possess antibody against S-protein, since most circulating antigen is S-protein.

HBsAg L-protein-ST type contains all the three components in one protein. The S-protein region, however, is so modified that the regular human antibody to S-protein does not recognize. The Pre-S1 and Pre-S2 region is intact and shows high antigen activity.

The Pre-S1 region is known to be the hepatic cell recognition site and to be important in the HBV infection. And Pre-S2 region is also known to play important role in HBV infection. Thus, the product can be used as a unique tool to investigate the mechanism of HBV infection as well as antigens for both Pre-S1 and Pre-S2. The product is also used as an antibody-escapable mimic antigen.

- Source:** Yeast ( *Saccharomyces cerevisiae* )
- Appearance:** Lyophilized white powder
- Activity:** Pre-S1 activity is approximately 1000  $\mu$ Unit/mg protein (One unit is an arbitrary scale which is determined by using Pre-S1 detecting ELISA kit sold by Beacle)
- Subtype:** adr (a few amino acids are exchanged to non-original ones)
- Structure:** Nano size particles having antigen protein floating in lipid bilayer. The mean particle size is 50 to 60nm as determined dynamic light scattering methods (20 nm as determined by electron microscopy)
- Content:** 100  $\mu$ g (BCL-AGS-02), 2000  $\mu$ g ( BCL-AGS-20 )
- Dissolve :** For 100  $\mu$ g vial, added 500 $\mu$ L of water to the vial that makes a antigen solution at 200  $\mu$ g/mL in PBS (137mM NaCl, 8.1mM Na<sub>2</sub>HPO<sub>4</sub> · 12H<sub>2</sub>O, 2.68mM KCl, 1.47mM KH<sub>2</sub>PO<sub>4</sub>, pH 7.2 - 7.4) containing 1% sucrose.  
For 2000 $\mu$ g vial, added 1000 $\mu$ L of water to the vial that makes a antigen solution at 2000  $\mu$ g/mL in HEPES-saline (10mM HEPES, 100mM NaCl) containing 1% sucrose.
- Purity:** over 95% (see SDS-PAGE)
- Storage:** -20°C (stable for over 24 months)
- SDS-PAGE:** see right figure



**Note:** HBsAg L-protein-ST type bind to plastic tubes. For dilution, please use protein-low bind tubes.

**About Product #:** Products with code# of BCL-AGS-01 is no longer available. The content and price of BCL-AGS-02 was changed. BCL-AGS-20 is produced upon request. For the detail visit our website.