



**Beacle, Inc.**



COSMO BIO CO., LTD.  
Inspiration for Life Science

For Research Use Only

## HBsAg L-protein-ST type

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

Product # : BCL-AGS-01, BCL-AGS-02

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.

<b>Source:</b>	Yeast ( <i>Saccharomyces cerevisiae</i> )
<b>Appearance:</b>	Lyophilized white powder
<b>Activity:</b>	Pre-S1 activity is approximately 1000 units/mg protein (One unit is an arbitrary scale which is determined by using Pre-S1 detecting ELISA system developed by Beacle)
<b>Subtype:</b>	adr (a few amino acids are exchanged to non-original ones)
<b>Structure:</b>	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)
<b>Content:</b>	30 $\mu$ g or 360 $\mu$ g (dissolving instruction: For 30 $\mu$ g vial, added 100 $\mu$ L of water to the vial that makes a antigen solution at 300 $\mu$ g/mL or 300 $\mu$ Unit/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 360 $\mu$ g vial, added 800 $\mu$ L of water to the vial that makes a antigen solution at 450 $\mu$ g/mL or 450 $\mu$ Unit/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.)
<b>Purity:</b>	over 95% (see SDS-PAGE data)
<b>Storage:</b>	-20°C (stable for over 24 months)
<b>Note:</b>	HBsAg L-protein-ST type bind to plastic tubes. For dilution please use protein low bind tubes.

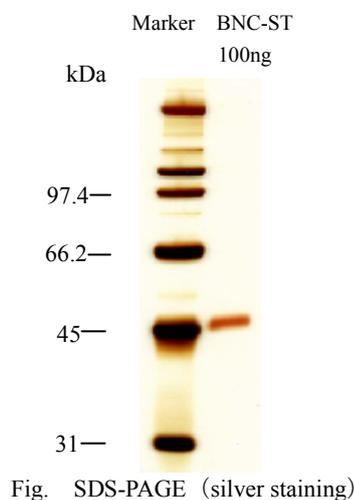


Fig. SDS-PAGE (silver staining)

Beacle Inc

E-mail: [technical-support@beacle.com](mailto:technical-support@beacle.com)

HP: <http://www.beacle.com>