

Hepatitis B Virus Surface Antigen Pre-S1 peptides Genotype A, B, C, D (Recombinant)

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. The Pre-S1 region is known to be the hepatic cell recognition site and to be important in the HBV infection. Pre-S1 region is known to have variation of amino acid sequence depending genotype.

The present products, Pre-S1 peptides of various genotypes can be used as a tool to investigate the mechanism of HBV infection, ELISA and others.

General information

Source : E.coli
 Appearance : Lyophilized white powder
 Dissolve : For 100 µg vial, added 500 µL of water to the vial that makes a antigen solution at 0.2 mg/mL in PBS (137 mM NaCl, 8.1 mM Na₂HPO₄ · 12H₂O, 2.68 mM KCl, 1.47 mM KH₂PO₄, pH 7.2 - 7.4) containing 1% sucrose.
 Purity : over 95%
 Storage : -20°C (3 years guarantee after dispatch)
 Usage : Standard antigen for ELISA, western, and others
 Tagged Pre-S1 peptides are better for ELISA plate immobilization.

Product variation and product

product#	product name
BCL-AGS1A-01	HBsAg,Pre-S1 peptide genotype A,noTag
BCL-AGS1B-01	HBsAg,Pre-S1 peptide genotype B,noTag
BCL-AGS1C-02	HBsAg,Pre-S1 peptide genotype C,noTag
BCL-AGS1D-01	HBsAg,Pre-S1 peptide genotype D,noTag
BCL-AGS1A-21	HBsAg,Pre-S1 peptide genotype A,Tagged
BCL-AGS1B-21	HBsAg,Pre-S1 peptide genotype B,Tagged
BCL-AGS1C-22	HBsAg,Pre-S1 peptide genotype C,Tagged
BCL-AGS1D-21	HBsAg,Pre-S1 peptide genotype D,Tagged

Amino acid sequence

Genotype A (no tag)

GPMGTNLSVPNPLGFFPDHQLDPAFGANSNPDWDFNPIKDHWPAAANQVGVGAFGPGGLTPPHGGIL
 GWSPQAQGILTTVSTIPPPASTNRQSGRQPTPISPLRDSHPQA (110a.a)

Genotype B (no tag)

GPMGTNLSVPNPLGFFPDHQLDPAFKANSENPDWDLNPHKDNWPDAAHKVGVGAFGPGFTPPHGGL
 LGWSPQAQGILTSVPAAPPASTNRQSGRQPTPLSPPLRDTHPQA (110a.a)

Genotype C (no tag)

GPMGTNLSVPNPLGFFPDHQLDPAFGANSHNPDWDFNPNKDHWPAAANQVGAGAFGPGFTPPHGGLL
 GWSPQAQGVLTTPVAPPASTNRQSGRQPTPISPLRDSHPQA (110a.a)

Genotype D (no tag)

GPMGQNLSTSNPLGFFPDHQLDPAFRANTANPDWDFNPNKDTWPDANKVGAGAFGLGFTPPHGGLL
 GWSPQAQGILQTLPANPPPASTNRQTGRQPTPLSPPLRNTHPQA (110a.a)

All tagged products has following sequence (Thioredoxin-His Tag and enzyme substrate sequence) in front of above Pre-S1 sequence

MSDKIIHLTDDSFDTDVLKADGAILVDFWAEWCGPCKMIAPILDEIADEYQGKLTVAKLNIDQNPQGT
 PKYGIRGIPTLLLFKNGEVAATKVGALSKGOLKEFLDANLAGSGSGHMHSHSSGLVPRGSGMK
 ETAAAKFERQHMDSPDLGTDDEKAMADIGSLEVLQ

(281 a.a including Pre-S1 sequence)