

Hepatitis B Virus Surface Antigen Pre-S2 peptides (Recombinant) Genotype A, B, C, D

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 and Pre-S2 is reportedly known to related HBV entry or carcinogenesis. Pre-S2 region is known to have variation of amino acid sequence depending genotype.

The present products, Pre-S2 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 100 µL of water to the vial that makes a antigen solution at 1 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-S2 peptides are better for ELISA plate immobilization.

Product variation and product

Product#	Product name
BCL-AGS2A-01	HBsAg, Pre-S2 peptide genotype A, no Tag
BCL-AGS2B-01	HBsAg, Pre-S2 peptide genotype B, no Tag
BCL-AGS2C-02	HBsAg, Pre-S2 peptide genotype C, no Tag
BCL-AGS2D-01	HBsAg, Pre-S2 peptide genotype D, no Tag
BCL-AGS2A-21	HBsAg, Pre-S2 peptide genotype A, Tagged
BCL-AGS2B-21	HBsAg, Pre-S2 peptide genotype B, Tagged
BCL-AGS2C-22	HBsAg, Pre-S2 peptide genotype C, Tagged
BCL-AGS2D-21	HBsAg, Pre-S2 peptide genotype D, Tagged

Amino acid sequence

Pre-S2 peptides lacks 44 to 49 amino acids of pre-S2 region, but the peptides is well recognized by ordinary anti-Pre-S2 antibodies.

Genotype A (no tag)

GPMQWNSTAFHQALQDPRVRGLYFPAGGSSSGTVNPAPNIAASHISGDPVTN (51aa)

Genotype B (no tag)

GPMQWNSTTFHQTLQDPRVRALYFPAGGSSSGTVSPAQNTVSAISGDPVPN (51aa)

Genotype C (no tag)

GPMQWNSTTFHQALLDPRVRGLYFPAGGSSSGTVNPVPTTASPISGDPAPN (51aa)

Genotype D (no tag)

GPMQWNSTTFHQTLQDPRVRGLYFPAGGSSSGAVNPVPTTASPLSGDPALN (51aa)

All tagged products has following sequence (Thioredoxin-His Tag and enzyme substrate sequence) in front of above Pre-S2 sequence

MSDKIIHLTDDSFDTDVLKADGAILVDFWAEWCGPCKMIAPILDEIADEYQGKLTVAKLNIDQNP
GTAPKYGIRGIPTLLLKNGEVAATKVGALSKGQLKEFLDANLAGSGSGHMHSHHHSSGLVPRGSGMK
ETAAAKFERQHMDSFDLGTDDDDKAMADIGSLEVLFFQ