

# HBV surface antigen Pre-S2 region quantitative ELISA kit

## HBs Pre-S2 Antigen Quantitative ELISA Kit, Rapid

The World only one kit to determine HBV Pre-S2 antigen

HBsAg is composed of Pre-S1, pre-S2 and S regions. For long time, only S antigen activity is measured for diagnosis purpose. The pre-S2 region is a few years ago reported to be involved in development of hepatocellular carcinoma. In recent years, increase of escape mutants of HBV which is not detected by S antigen detection kits are big concern in HBV research.

Beacle Inc. has first commercialized a pre-S2 detection kit in order to accelerate researches in HCC development, escape mutant and HBV infection mechanism. Now we have developed new type of pre-S2 detection kit. This kit is designed for quantitative determination of pre-S2 antigen with quick manner.

As fast as 90 min

### Features

1. Quantitative determination of pre-S2
2. High sensitivity (as low as 0.1nUnit/mL\*)
3. Safe and reproducible (recombinant standard)
4. Quick determination (minimum 90 min\*\*)
5. Human serum sample can be used

\*: one nunit is defined as the activity of 1ng of the standard antigen.

\*\* : does not include sample preparation, washing and abs measurement.



【Kit composition】 Almost all reagents are equipped for determination (see other side for detail)

Product code	Product name
BCL-S2HP-01	HBs Pre-S2 Antigen Quantitative ELISA Kit, Rapid

### 【Related products】

Product #	Product name	Price
BCL-SHP-21	HB S Antigen Quantitative ELISA Kit, Rapid-II	1 kit
BCL-S1HP-01	HBs Pre-S1 Antigen Quantitative ELISA Kit, Rapid	1 kit
BCL-S1D-01	HBs Pre-S1 Antigen Quantitative ELISA Kit (Genotype D)	1 kit

\*HBsAg-related recombinant antigens : Full-length type (L-protein) , full length S region-mutant type (L-protein ST) , high S antigen type (XT) 、 Pre-S1 and Pre-S2 peptides and others are available.

\*Antibodies against HB s Ag-related antigens : Anti-HBs S, Anti-HBs Pre-S1, Anti-HBs Pre-S2 antibody (monoclonal & polyclonal) .All antibodies can be used for ELISA and Western blot.

### 【Produced by】

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### 【Distributor】

## 【Principle and the time required for determination】

The main components of this kit are pre-coated plate, HRP-labeled detection IgG and standard antigen. The standard antigen and samples are applied onto pre-coated microplate with capture IgG. Antigens captured by plate was detected by the detection IgG-HRP. The HRP was then determined by chromogenic agent. Thus, this kit uses standard sandwich technique.

The kit can be used in two ways as shown below. There is essentially no difference in sensitivity or signal strength between the two method except for the times required for assay.

**One step method** (employed when one can dilute sample more than 10 times) :

①reactions of antigen with capture and detection IgGs: 60 min→②chromogenic reaction:30 min  
(Total 90 min)

**Two step method** (employed when one wish no or minimum sample dilution) :

①reaction of antigen with capture IgG: 60 min→②reaction of antigen with detection IgG: 60 min  
→ ③chromogenic reaction:30 min (Total 150 min)

\*:The total time does not include times required for sample preparation, washing, and absorbance measurement.

## 【Kit Components】

Detection IgG-HRP solution	1 tube
Standard recombinant antigen lyophilized	1 tube
Detection IgG dilution buffer	1 bottle
Reaction buffer (3×concentrated)	1 bottle
Buffer A (20× concentrated)	1 bottle
Chromogenic Reagent A	1 tube
Chromogenic Reagent B	1 bottle
Stop Solution	1 bottle
Pre-Coated 96 wel microplate	1 plate
Instruction manual	1 booklet

### \*About pre-S2 antigen activity

There is no established definition to express pre-S2 antigen activity. In this kit, one nUnit of activity is defined as that of 1ng of the standard antigen which is a component of the kit.

## 【Equipments and Materials】

Following equipments and materials should be prepared by yourself for using the kit:

- Microplate leader (absorbance wave length =450 nm)
- Micropipettes
- Microtubes
- Plate sealer
- 8-channel multi pipette with reservoirs
- Distilled water

## 【Example of standard curve】

Below figure is an example of standard curve obtained using the kit by one step method.

STD		Abs450 nm
ID	nUnit/mL	
STD①	30	2.166
STD②	10	0.927
STD③	5	0.488
STD④	1	0.103
STD⑤	0.5	0.054
STD⑥	0.2	0.022
STD⑦	0.1	0.010

