



PseeR HBV Detection PCR kit (100 tests)

The Hepatitis B virus (HBV) is a partially double-stranded circular DNA of about 3200 pairs. HBV can be transmitted by blood and blood products to humans. The *PseeR* HBV detection kit detects and quantifies HBV in plasma and serum samples. The principle of detection in The *PseeR* HBV detection kit is based on target DNA amplification of HBV and fluorescent detection that are monitored on real-time PCR instruments.

***PseeR* HBV detection kit features**

- Hotstart high-fidelity Taq polymerase to ensure high specificity and avoid non-specific amplifications.
- High sensitivity, detection limit as low as 100IU/mL.
- Detection of all 10 HBV genotypes (A-J).

Kit components

components	Quantity	Volume
<i>PseeR</i> HBV Buffer	1 vial	510 µL
<i>PseeR</i> Taq polymerase	1 vial	51 µL
100mM MgSO ₄	1 vial	100 µL
<i>PseeR</i> primers/probes Mix	1 vial	130 µL
IC Template	1 vial	500 µL
Standard 1 (1×10 ⁸ IU/µL)	1 vial	50 µL
Standard 2 (1×10 ⁷ IU/µL)	1 vial	50 µL
Standard 3 (1×10 ⁶ IU/µL)	1 vial	50 µL
Standard 4 (1×10 ⁵ IU/µL)	1 vial	50 µL
Standard 4 (1×10 ⁴ IU/µL)	1 vial	50 µL

PCR Reaction Setup


Component	Volume for 1 Reaction
<i>PseeR</i> HBV Buffer	5 µL
<i>PseeR</i> Taq polymerase	0.5µL
100mM MgSO ₄	0.5µL
<i>PseeR</i> primers/probes Mix	1.5µL
IC Template	1.5µL

DNA Template/ Standard	16µl
Total volume	25µL

- Internal Control (IC) template can be added to the sample before the extraction to control the extraction and PCR altogether or can be added as a control for PCR only, as follows:

Component	Volume to add to extraction	Volume to add to PCR
IC Template	5 µL	1.5 µL

Program Setup on real-time PCR instrument

Step	Cycles Number	Program	Analysis mode
Hotstart Activation	1	94°C for 2 min	None
Amplification	40	94°C for 10 sec	None
		58°C for 30 sec 	FAM for HBV & HEX for IC

Results

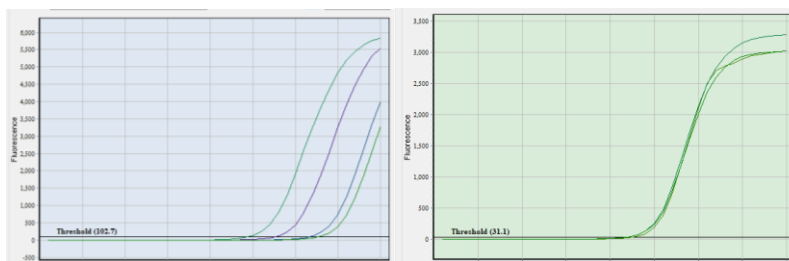


Fig1. HBV results in FAM channel **Fig2.** IC results in HEX channel

Analysis

Analysis interpretation can be done following the below table:

FAM channel	HEX channel	interpretation
√	√	Positive
-	√	Negative
√	-	Invalid
-	-	Invalid



Compatible instruments

DT-Prime 96, DT-lite 48 (DNA-technology, Russia)

Step-one, Step-one plus, 7000, 7500 (Applied-Biosystems)

Storage and stability

- The *PseeR* HBV Detection PCR kit should be stored in -20°C.
- Repeated thawing and freezing (> 2 x) of the *PseeR* HBV Buffer should be avoided. If it is to be used only intermittently, *PseeR* HBV Buffer should be frozen in aliquots.