Hepatitis C Virus Nucleic Acid Quantitative Detection Kit (Fluorescent PCR)

Hepatitis C is a viral infection that causes liver inflammation, sometimes leading to serious liver damage. The hepatitis C virus (HCV) spreads through contaminated blood. Globally, HCV exists in several distinct forms, known as genotypes. Seven distinct HCV genotypes and more than 67 subtypes have been identified. The most common HCV genotype in the United States is type 1.

Quantitative determination of HCV-RNA can evaluate the viral load and replication activity in patients. It is currently the "gold standard" for evaluating HCV replication. It is a laboratory detection index to help diagnose recessive HCV infection and recessive chronic hepatitis C. effective indicator of development. Nucleic Acid Amplification Test (NAT) is sensitive to low levels of HCV virus in the body, and can detect low-load viruses, understand the number of viruses in the body, replication level, infectivity, drug treatment effects, formulate treatment strategies, etc., and use them as evaluation indicators , is also the only laboratory detection indicator that can help diagnose occult HCV infection and occult chronic HCV.

Product Features

Sample Type

Serum, Plasma

High Accuracy

Effectively quantitatively the content of hepatitis C virus in the sample, and the result meets expectations.

Good Specificity

No cross-reaction with human immunodeficiency virus, hepatitis B virus, herpes simplex virus type 1, herpes simplex virus type 2, influenza A virus, Staphylococcus aureus, Epstein-Barr virus, dengue virus, Candida albicans and other pathogens.

Real-time Monitoring

The introduction of exogenous internal standards is used to monitor the entire extraction and PCR detection process.

Specifications

Parameter	Description
Sample Type	Serum, Plasma
Genotype	1-6，6 Genotypes
Limit of Detection	25 IU /mL
Limit of Quantitation	50 IU/mL
Linear Range	50 IU /mL ~2×10^9 IU /mL
Precision	The intra-assay and inter-assay coefficients of variation (CV%) were less than 5%
Specificity	No cross-reaction with human immunodeficiency virus, hepatitis B virus, herpes simplex virus type 1, herpes simplex virus type 2, influenza A virus, Staphylococcus aureus, Epstein-Barr virus, dengue virus, Candida albicans and other pathogens
Compatible Platform	Bioer LineGene、QuantGene Real-Time PCR System
Detection Time	60 min
Storage Condition	-20 ± 5℃ Keep away from light

Application Cases

Case 1

The kit was used to detect hepatitis C virus and a standard curve was draw . The correlation coefficient of the target gene Ct value was above 0.995, indicating that the kit has a good linear relationship and high PCR efficiency. The result is shown in the figure below:

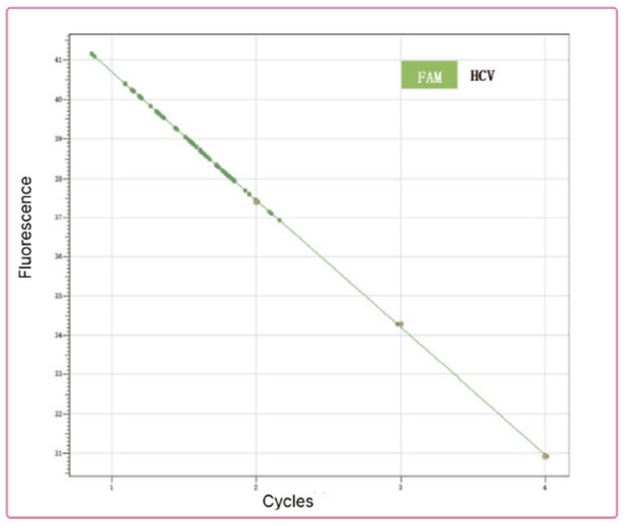

Figure-1

Result：Standard curve of hepatitis C virus quantitative detection kit.

Case 2

The kit is used to detect hepatitis C virus of known samples, and the logarithmic deviation between the quantitative value and the theoretical value is ≤0.5, which shows that the kit has a high determination accuracy. The result is shown in the figure below:

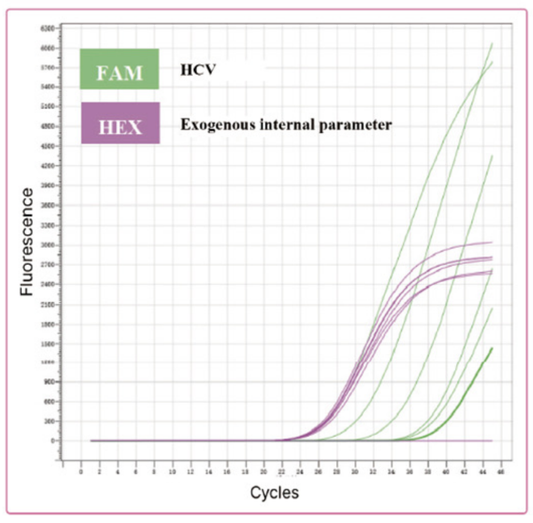

Figure-2

Sample	Theoretical concentration IU/mL	Measurement Concentration IU/mL	Logarithmic Deviation
S1	100000	9.40e+04	0.03
S2	10000	1.13e+04	0.05
S3	1000	9.40e+02	0.03
S4	100	8.19e+01	0.09
S5	50	5.18e+01	0.02
S6	25	2.09e+01	0.08
NTC	\	\	\

Result：qPCR amplification curve of the hepatitis B virus quantitative detection kit.

Case 3

The low-concentration hepatitis C virus nucleic acid sample was repeatedly tested with this kit, the coefficient of variation of the Ct value was less than 2%, and the coefficient of variation of the logarithmic value of the quantitative concentration was less than 5%, indicating that the kit has good reprodu ibility. The test results are stable and reliable, and the test results are as follows:

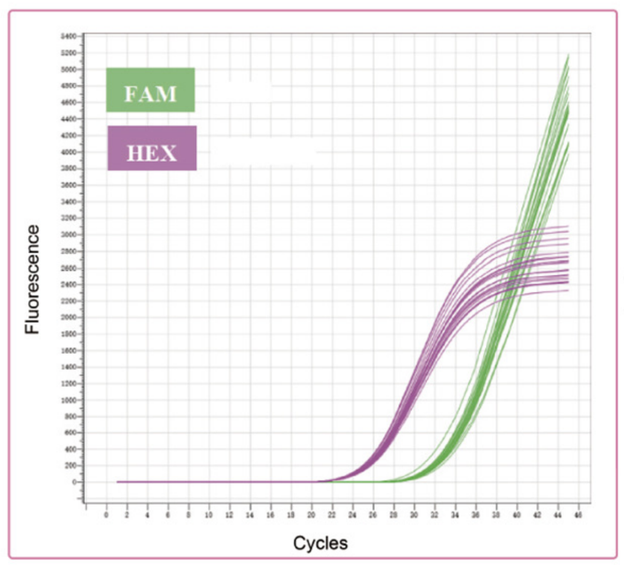

Figure-3

	Target CT Value	Concentration IU/mL	Logarithmic value
1	34.70	1.26E+03	3.10
2	34.56	1.39E+03	3.14
3	34.12	1.88E+03	3.27
4	34.18	1.80E+03	3.26
5	34.65	1.31E+03	3.12
6	33.94	2.13E+03	3.33
7	33.16	3.61E+03	3.56
8	34.25	1.72E+03	3.24
9	34.50	1.45E+03	3.16
10	34.30	1.66E+03	3.22

	Target CT Value	Concentration IU/mL	Logarithmic value
11	34.58	1.37E+03	3.14
12	33.86	2.25E+03	3.35
13	34.43	1.52E+03	3.18
14	34.91	1.10E+03	3.04
15	34.24	1.73E+03	3.24
16	34.57	1.38E+03	3.14
17	35.12	9.49E+02	2.98
18	34.42	1.53E+03	3.18
19	34.32	1.63E+03	3.21
20	33.98	2.07E+03	3.32
CV%	1.23%	\	3.89%

Result：Repeatability verification of hepatitis C nucleic acid samples.

Cat. No.	Product	Package
BSB02M1F	Hepatitis C Virus Nucleic Acid Quantitative Detection Kit (Fluorescent PCR)	48T