INSTANOSIS
Bringing High Performance Diagnostics to Patient's Side

InstaTiter P24 test cassette

The InstaTiter P24 test is a novel combo lateral flow assay designed for the rapid detection and semi-quantitative measurement of lentiviral titers, as well as virus-like particles. The assay features a simple workflow and can be completed within 10 minutes without the need for any instrumentation. The test cassette can be used directly with unpurified samples in cell culture media, with or without FBS, and is also compatible with samples prepared in common buffers such as PBS, Tris, and HEPES.

The detection limit of the InstaTiter P24 test cassette is 10^4 TU/mL, with a quantitative range extending from the detection limit up to 10^7 TU/mL. Unlike traditional sandwich lateral flow assays, the assay is not affected by the hook effect and therefore does not generate false-negative results at high analyte concentrations. By comparing the line pattern on the strip with the reference images provided in the protocol (see back), viral titers can be easily determined in a semi-quantitative manner by naked-eye inspection.

InstaTiter is a patent-pending technology and represents a first-of-its-kind lateral flow platform that enables quantitative analyte measurement with unprecedented ease and speed.

Contents and Storage

CATALOG NUMBER	UNIT	STORAGE
IT-P24-25	25	Room temperature Keep dry
IT-P24-100	100	Room temperature Keep dry

Precautions

1. There are three lines on the strip: the control line (C), test line 1 (T1), and test line 2 (T2). The C line is the uppermost line and is positioned to the left of the "C" mark on the cassette. The T1 line is the middle line and is located to the left of the upper part of the "T" mark on the cassette. The T2 line is the lowest line and is positioned to the left of the lower part of the "T" mark on the cassette.

2. The reference line patterns provided in the protocol were read at 10 minutes. Results can appear clearly within 2 to 5 minutes if the titer is high. Reading the results at a later time may increase assay sensitivity. Although the line pattern remains stable for at least 3 hours, the line color may gradually fade.

3. The assay detects the p24 protein. The results shown here are for lentivirus; for HIV-based virus-like particles, the sensitivity is the same, as it is determined by p24 content.

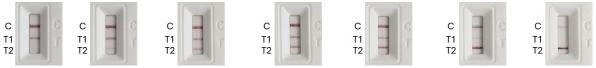
4. For more accurate measurements, standard samples with known titers of the same virus in the same matrix can be used to generate reference line patterns, which can then be compared with the pattern of the test sample.

Refer to the back for detailed test procedure instructions

Version 02112026

Test Procedure

Step	Description	Illustration
1	Add 100 µL of the sample to the sample hole. (*If the sample volume is limited, you may dilute it with a buffer, such as PBS, to reach the required 100 µL*)	
2	Wait 10 minutes	
3	Read the result by comparing to the images below	



TU/mL	0	1 × 10^4	2.5 × 10^4	5 × 10^4	1 × 10^5	1 × 10^6	1 × 10^7
Line pattern	Two clear lines C and T1. C>T1	Two clear lines C, T1 and a faint line T2. C>T1>>T2	Three clear lines C, T1 and T2. C>T1≥T2	Three clear lines C, T1 and T2. C>T1≈T2	Three clear lines C, T1 and T2. C≥T2>T1	Two clear lines C, T2 and a faint line T1. T2>C>>T1	Strong T2 line and weak C line. T1 disappears. T2>>C