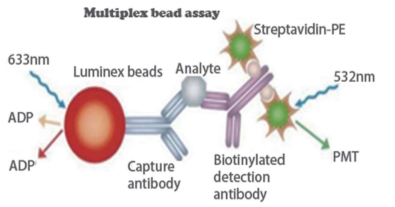
iP96
Multimode Microplate Reader

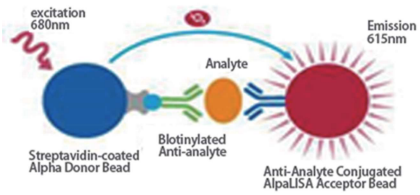
Product Description

The iP96 series is a multimode microplate reader with high sensitivity, wide dynamic range and high linearity based on the combination of innovative linear PMT detection technology and dual excitation light source compensation technology. iP96 offers a budget-friendly solution that gives you exactly what you need.
With three modes of detection for Luminescence (Lum), Light-induced chemiluminescence (LiCA), and time-resolved fluorescence (TRF), user can flexibly configure the detection mode from 1 to 3modes, and it provides researchers with a versatile instrument that does not compromise on sensitivity or performance.The instrument is widely used in the fields of nucleic acid assay, immuno-assay, and cell analysis, for instance, performing protein detection, enzyme activity kinetics, kinase detection, intermolecular interaction, agglutination reaction, reporter gene detection, cell viability/toxicity, bacteria adhesion, food toxin, and hormone detection applications.



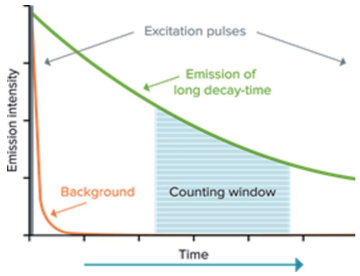
Luminescence (Lum)

The photons generated by the luminescence reaction are converted into electrical signals for detection by PMT in the reader. The signal collected by instrument covers the entire spectrum and allows to do glow-type luminescence. Luminescent detection provides high sensitivity and wide dynamic range to the assay,which does not require a light source or specific optics for excitation, thus it is optically simpler than fluorescence detection.



Light-induced chemiluminescence (LiCA)

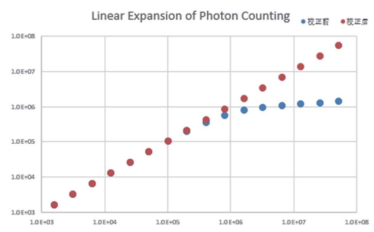
LiCA technology is a homogeneous affinity detection method based on a pair of microbeads that can be used for almost all research applications. LiCA no-wash assays provide simple, rapid,and highly sensitive detection of biomolecules in cell lysates,cell supernatants, serum,and various other types of samples,as well as binding assays with a broad affinity range.LiCA detection technology can complete 96-well plate detection in minutes,while maintaining a very high signal-to-background ratio,enabling fast, highly sensitive detection techniques.



Time-resolved fluorescence(TRF)

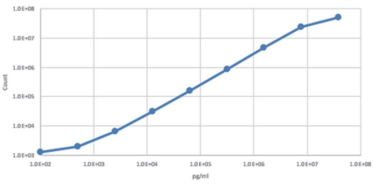
TRF provides higher signal-to-noise ratios,excellent sensitivity&stability, wider dynamic range,as well as flexibility,even in limited or very low sample volumes. TRF detection uses the fluorescence retention effect of lanthanide chelates to reduce the interference of background fluorescence in the reaction that significantly improve the dynamic range and has high signal stability.

Product Features



Using dual-mode photon counting acquisition and correction technology,through the patented photon counting linear fitting technology,the commonly used photon counter with a dynamic range of 10^5 can be expanded to 10^7,expanding the dynamic/ linear range by 100-fold and adapting to a wider range of concentration gradient experiments.

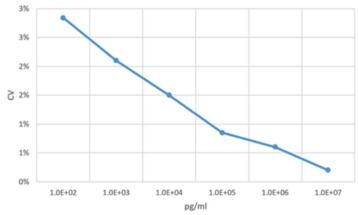
The confocal optical system can effectively suppress the interference of ambient stray light,and minimize the cross-interference caused by the difference in high and low concentrations between wells.



In the TRF detection mode,the combination of dual excitation optical paths and high dynamic range PMT technology can ensure that weak signals are detected, while strong signals do not enter the saturation state,and the maximum dynamic range and linear range can be obtained at one time.

In the LiCA mode,laser is used for excitation, which can minimize the influence of non-specific fluorescence in the microplate or reaction sample excited by other light.

With a built-in incubator for temperature control up to 45°C,iP96 provides a uniform incubation and prevents condensation. It is well-suited for temperature-critical applications, including certain enzyme assays and cell-based applications.

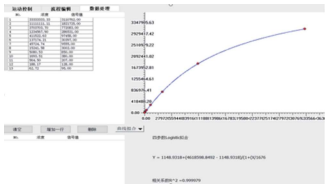


iP96 comes with an analysis software,its easy-to navigate interface will guide you through the measurement process and help you get the results you need.A variety of application schemes and experimental templates are preset in the software,suitable for most common applications.

Support different measurement modes such as standard curve quantification, end-point method, kinetic analysis, etc.

iP96 has power-on self-test and auto-calibration functions for reliable result.

Automatic dynamic range, which selects optimal reading range based on the signal intensity.



The instrument supports 8*12 opaque microplate and automation-friendly plate carrier guarantee an easy integration into robotic platform.

Small footprint meets the requirements of small space configuration, saving the laboratory space as much as possible.

Specification

Model	iP96-L	iP96-T	iP96-C
Microplate Type	96wells Opaque Microplate		
Reading	TOP		
Temperature	Ambient+5-45℃		
Detection Mode	LiCA	TRF	Glow Luminescence
Excitation Wavelength	685±5nm	365±10nm	NA
Emission Wavelength	610±10nm	610±10nm	380-700nm
Dark Background	<200CPS	<200CPS	<200CPS
Repeatability	<3%	<3%	<3%
Dynamic Range	7-order of magnitude	7-order of magnitude	7-order of magnitude
End-Point	YES	YES	YES
Slope Method	YES	YES	YES
Kinetic Curve	YES	YES	YES
Curve Fitting	Linear fit, logarithmic fit, exponential fit, polynomial fit, four-parameter Logistic fit		
Other Functions	Programmable		
Weight/Dimension	9KG/345mm*248mm*210mm		
Power Supply	AC220V，50Hz		

Order Information

Cat No	Product	Description
2001200	iP96-X2	Dual Detection modes Microplate Reader(LiCA and Lumi)
2004200	iP96-L	LiCA Detection mode
2005200	iP96-C	Chemi-Luminescence Detection mode
2006200	iP96-T	Time-Resolved Fluorescene Detection mode
920000	Consumable	White Opaque 96-Well Microplate