

Ultra-fast PCR Total Solution

Delivered by P810 Real-time fluorescence PCR instrument and more...



Introduction to P810

P810 real-time quantitative PCR analyzer is an ultra-fast PCR analyzer developed by Runpon Bioscience. Equipped with intelligent and simple system software and advanced temperature control patent technology, P810 can complete 40 amplification cycles in 8-15 minutes, followed by easy result analysis, data export and upload to LIMS.

P810 Product Advantages



Stable and efficient

Unique temperature control system and variable temperature mode ensure the stability and uniformity of the instrument; excellent heat transduction efficiency improves the specificity and sensitivity of the reaction.



Universal and reliable

Universal 4-channel fluorescence detection, easy to adapt to multiple applications; reliable excitation light source and signal detection technology to effectively avoid cross-interference.



Smart and convenient

Equipped with an intelligent and fully functional software system, it can provide a complete set of solutions for sample detection, data calculation and result analysis.



Excellent quality

International product design and development concept and production process quality control to ensure the excellent quality of each instrument.

P810 specifications

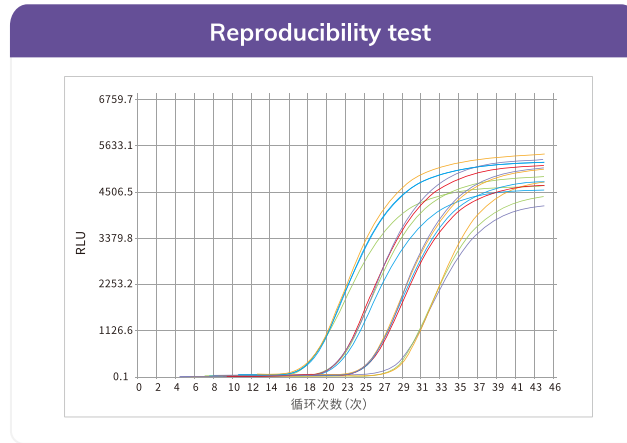
Real-time fluorescence quantitative PCR analysis system

| Device Information | Type | Real-time PCR Instrument |
|------------------------------------|---------------------------------|--|
| | Model | P810 |
| Basic specifications | reaction volume | 15-25 μ L (15 μ L recommended) |
| | Amplification speed | 40 cycles 8-15min |
| Temperature control specifications | temperature control technology | Multi-zone temperature control |
| | Maximum heating rate | 20 $^{\circ}$ C/s |
| | Maximum cooling rate | 13 $^{\circ}$ C/s |
| | Temperature range | 15~130 $^{\circ}$ C |
| | Temperature accuracy | Within \pm 0.5 $^{\circ}$ C |
| Optical parameters | Excitation light source | High intensity white LED light source |
| | Excitation wavelength | 420-490nm, 509-545nm, 552-594nm, 607-644nm |
| | Detection wavelength | 490-532nm, 545-583nm, 594-634nm, 644-686nm |
| | Detection device | CMOS camera |
| | Number of fluorescence channels | 4 channels (blue/green/yellow/red) |

P810 Performance Verification

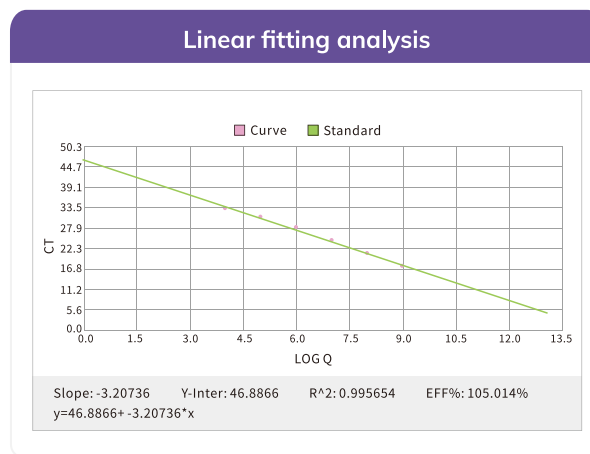
- Excellent reproducibility – ensures reliable results

Repeatability is a key indicator for evaluating the stability and reliability of an instrument, and it is also one of the important manifestations of the credibility of the results. P810 is based on a stable and reliable optical detection system and uniform temperature control technology between wells, which enables excellent data repeatability.

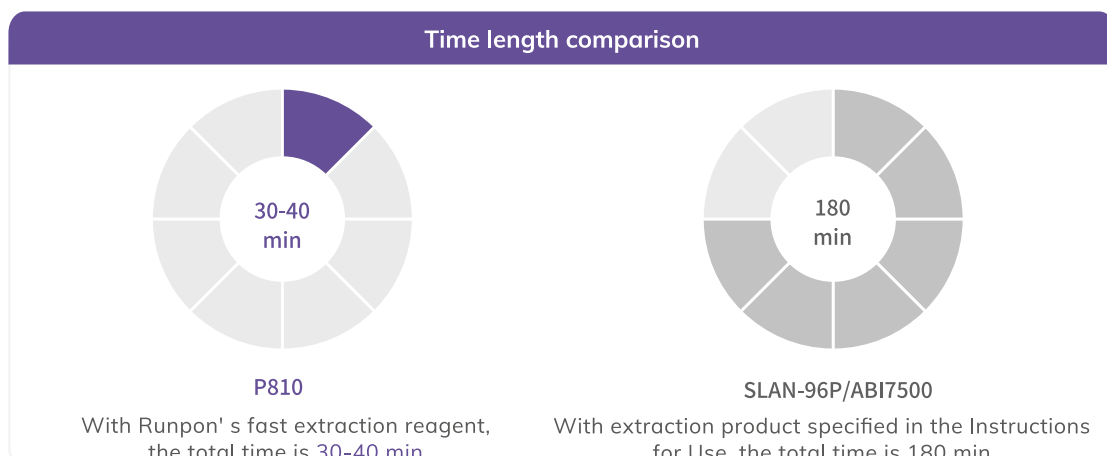


- Excellent gradient linearity – ensures data accuracy

P810 uses accurate temperature control and uniform temperature control technology between wells, and is equipped with a rapid amplification reagent system to achieve a gradient linear $R^2 \approx 0.99$, and the amplification efficiency is 105%.



- Clinical examination time comparison



• Clinical comparison results

Clinical symptoms of respiratory diseases such as fever, cough, sore throat, runny nose, nasal congestion, headache, fatigue, chills, and muscle aches. The clinical evaluation project of respiratory adenovirus (HADV) detection products has enrolled 90 cases. The age of the patients ranges from 4 days after birth to 54 years old, and most of them are children. The main disease types include lung diseases (31.1%), blood diseases (18.9%), Respiratory tract infection (8.9%) and other (39.7%), with reference product

The statistics of the test results are as follows:

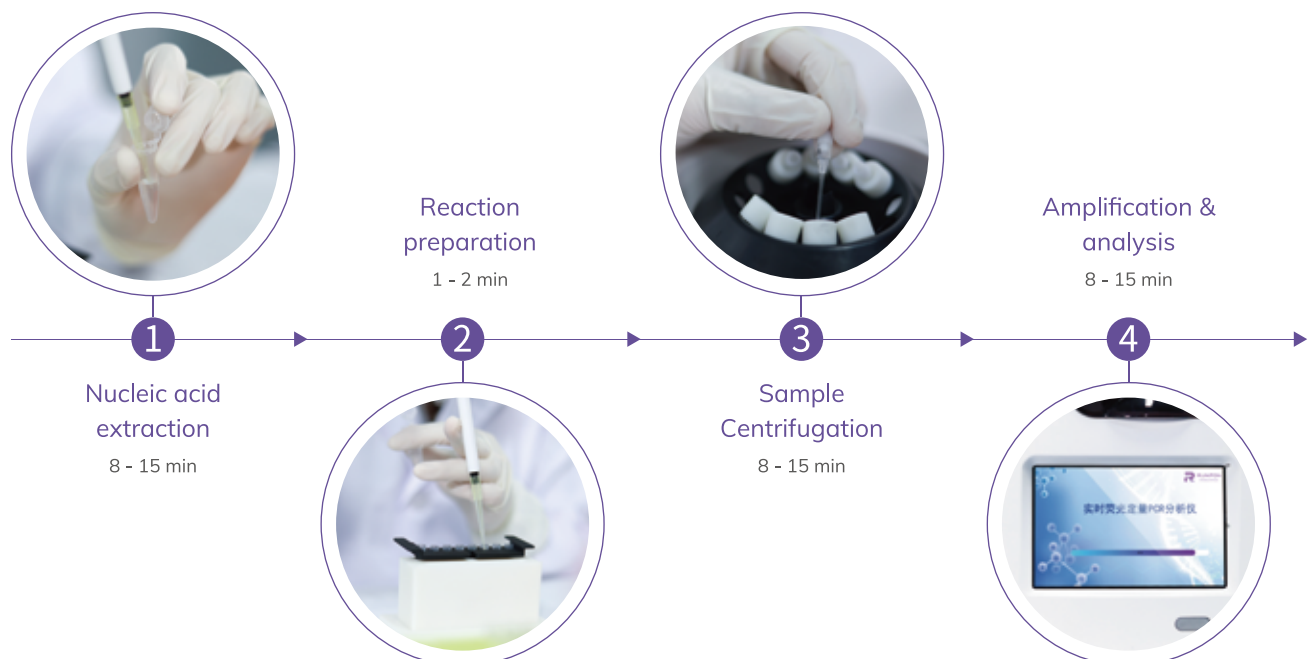
| HADV detection products | Reference product | | Coincidence rate % (95% CI) | Kappa (95% CI) |
|-------------------------|-------------------|----------|--|------------------------|
| | Positive | Negative | | |
| Positive | 35 | 3 | Positive coincidence rate: 92.1 (78.6-98.3) | 0.863 (0.758-0.969) |
| Negative | 3 | 49 | Negative coincidence rate: 94.2 (84.1- 98.8) | |

The clinical evaluation project of respiratory syncytial virus (RSV) detection products has enrolled 146 cases. The age of the patients ranges from 4 days after birth to 583 years old, and most of them are children. The main disease types include lung diseases (34.9%) and blood diseases (14.4%), respiratory infections (11.0%) and others (41.1%). The statistics of the test results compared with the control product are as follows:

| RSV products | Reference product | | Coincidence rate % (95% CI) | Kappa (95% CI) |
|--------------|-------------------|----------|---|------------------------|
| | Positive | Negative | | |
| Positive | 69 | 4 | Positive coincidence rate: 90.8 (81.9-96.2) | 0.849 (0.764-0.935) |
| Negative | 7 | 66 | Negative coincidence rate: 94.3 (86.0-98.4) | |

As shown above, the coincidence rates are greater than 90% and the Kappa value is higher than 0.75, indicating the high consistency and equivalent clinical value of our HADV test and RSV test based on P810 compared against the mainstream respiratory pathogen detection products based on ABI7500.

P810 Operation Flow





P810 compatible reagents and consumables

| Serial No. | Product name |
|------------|---|
| 1 | Viral DNA/RNA Extraction Reagent (Magnetic Bead Method) |
| 2 | Viral DNA/RNA Rapid Extraction Reagent (Magnetic Bead Method) |
| 3 | Viral DNA/RNA extraction reagent (alcohol-free magnetic bead method) |
| 4 | Respiratory Adenovirus (HADV) Nucleic Acid Detection Kit (PCR-Fluorescent Probe Method) |
| 5 | Respiratory syncytial virus (RSV) acid detection kit (PCR-fluorescent probe method) |
| 6 | Automatic Nucleic Acid Extractor RP-Q32/RP-Q16 |
| 7 | 96 well deep well plate |
| 8 | 8 magnet bar sleeves |
| 9 | One-step rapid reaction starting material |
| 10 | fast DNA polymerase |
| 11 | fast reverse transcriptase |
| 12 | PCR capillaries |
| 13 | Capillary Loading Holder (Lab Consumables) |

*These products are protected by patent



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