

# AccuMini dPCR



# Chip-based Digital PCR

**100%**

Chip utilization rate is 100%, independently

**2 H**

Test is completed within 2 hours

**1 COLOR**

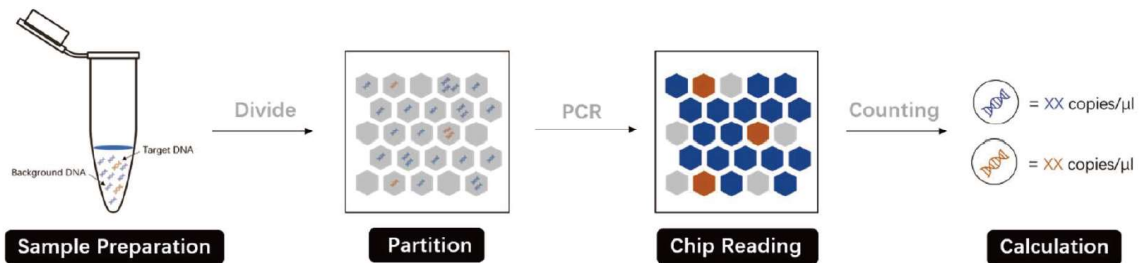
1 fluorescence channels, Probe/Dye



AccuMini Digital PCR System

# Digital PCR Principle

The strategy of digital PCR - "divide and rule". A standard PCR reaction is allocated to a large number of micro reactors, and each reactor contains or does not contain one or more copies of the target molecule (DNA template) to achieve "single molecule template PCR amplification". After amplification, the number of positive wells is "counted" by the number of positive reactors, and then the number of positive copies is calculated according to Poisson's formula.



# Technical Advantages



**Direct**

Interpretation by endpoint method, no standard curve required



**Sensitive**

Single copy detection, suitable for low concentration samples



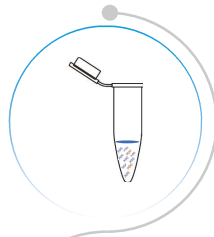
**Stable**

Not susceptible to inhibitory factors & amplification efficiency

## Workflow

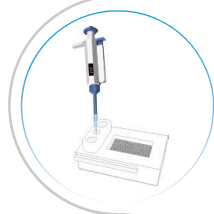
### 1. System Preparation

Mix nucleic acid template, digital PCR Master Mix, primers, probes and other PCR components in proportion.



### 2. Micro-unit Generation

The sample preparation instrument completes the generation of tens of thousands of micro-units



### 3. PCR

Complete gene amplification on the gene chip amplification instrument.



### 4. Chip Reader & Analysis

Chip photography and imaging, software analysis and calculation of target concentration.



Whole process < 2.5h

## Digital PCR Master Mix

- DigitalAmp PCR Master Mix (10X)  
Suitable for probe method, suitable for high sensitivity ultra-multiplex dPCR amplification reaction.



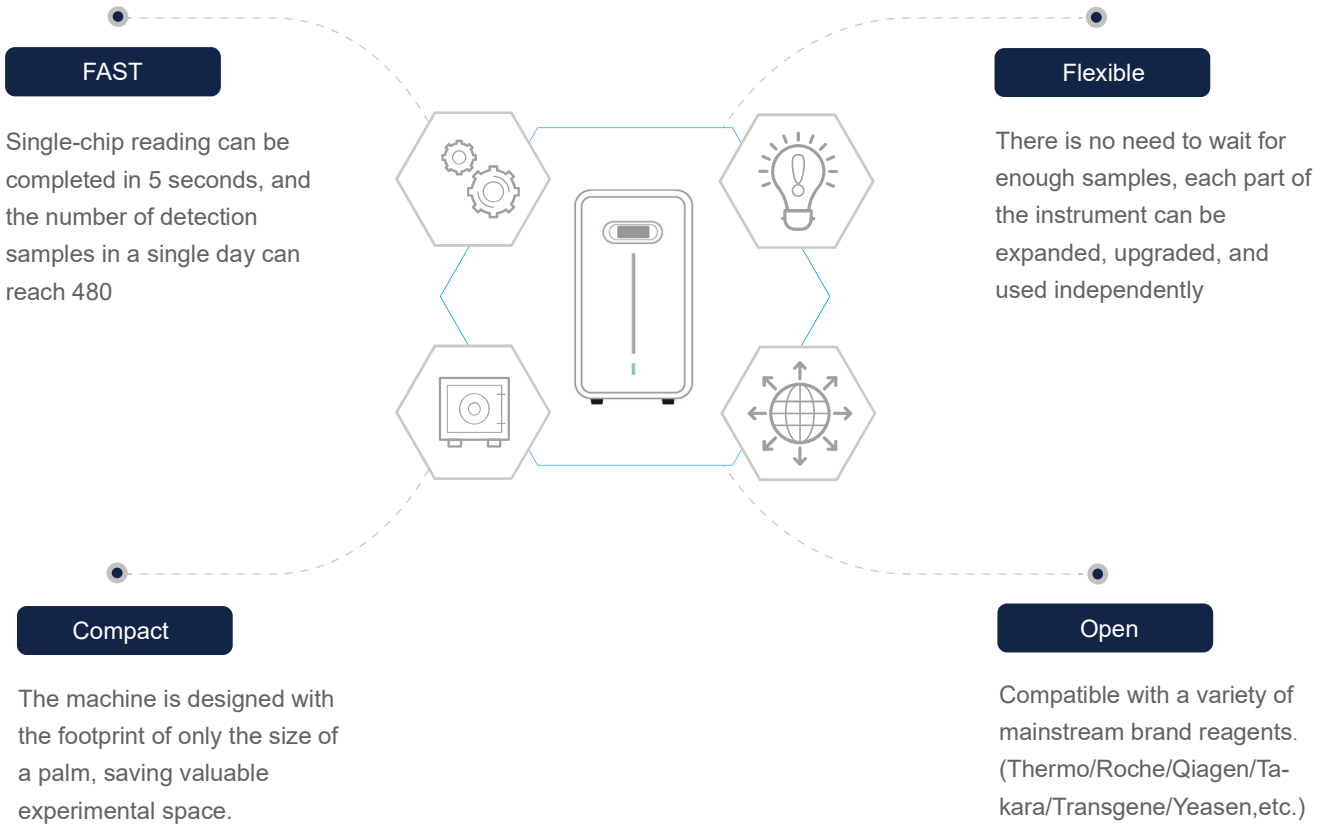
- DigitalAmp PCR Master Mix (SYBR Green)

Suitable for dye method, efficient and stable.

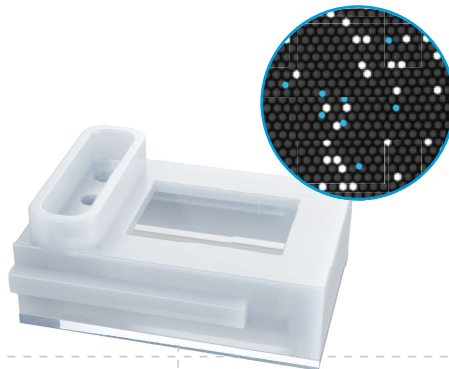
- One-step RT-dPCR Mix (5X)

A one-step reaction system was applied, and RNA was directly amplified

## Product Features

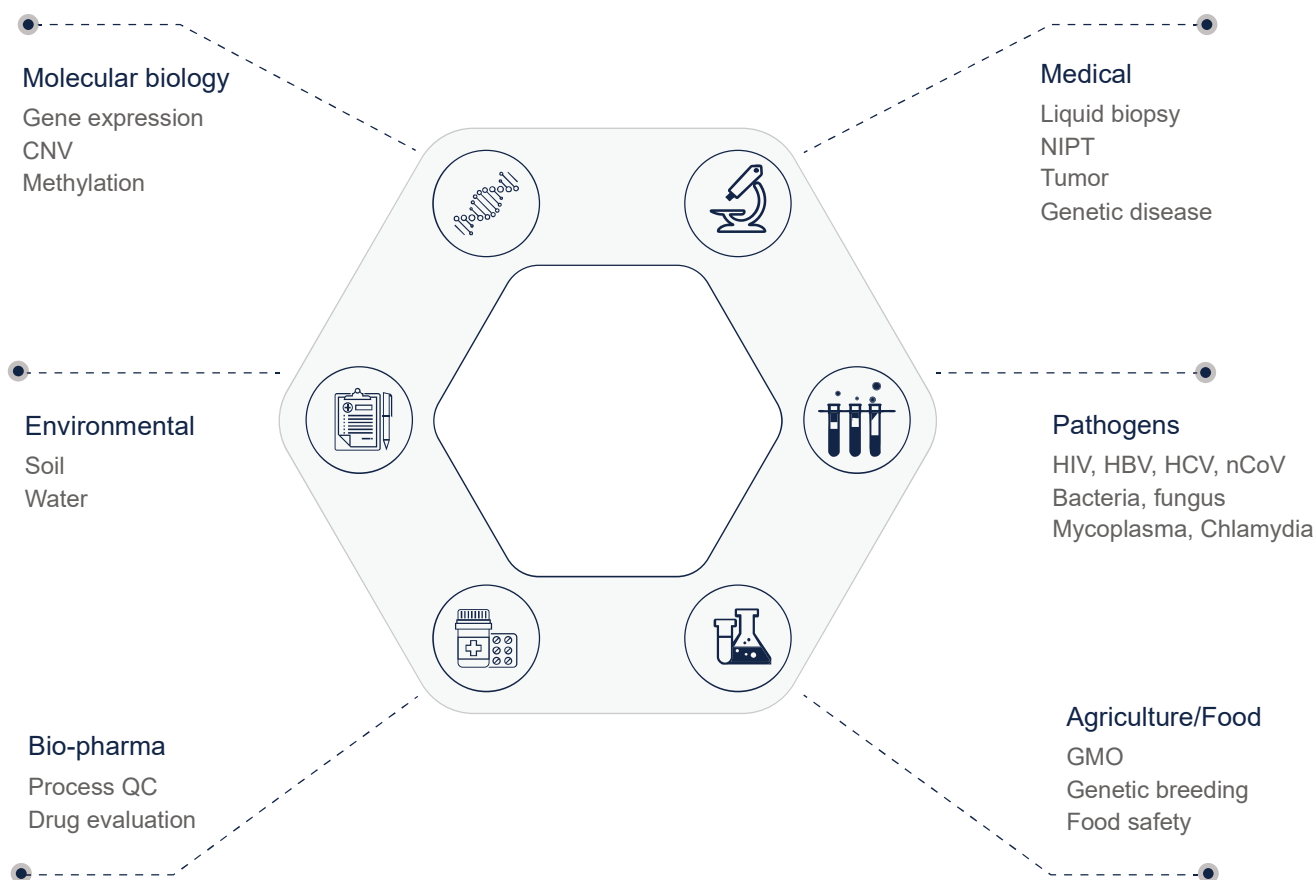


## Integrated Microcavity Chip



- Instantaneous droplet preparation, further shortens experimental time
- Chips are fully enclosed to eliminate cross-contamination
- The chip can be read repeatedly, and the reaction unit can be observed independently, which is conducive to analysis and traceability, and the system is highly open

## Application



## Specifications

Model	AccuMini
Micro-reaction unit	micro-cavity chip, solid phase segmentation
Bio-chip type	10k, 22k, 120k option, other type is customizable
Droplet preparation	Pipetting without additional micro-droplet generation system
Reaction volume	15ul standard, adjustable within the 40ul range
Sample preparation time	≤10 seconds/piece
Excitation light source	High-efficiency maintenance-free LED light source
Detector	High-resolution CMOS sensor
Valid time of chip reading	Read repeatedly within 2 weeks
Number of fluorescence channel	1
Compatible dyes	FAM, SYBR Green, EvaGreen, VIC/HEX and other dyes and similar wavelength dyes
Sample detection throughput	1/batch, can be read continuously without interruption
Daily detection throughput	360 in a single day (8 hours)

Sample detection time	≤1 minute/piece
Detection sensitivity	≤0.001%, can detect single-copy genes
Dynamic range	≥5 orders of magnitude, 1~250000 copies/sample
Reagent versatility	Compatible with probe method and dye method
Supporting reagents	10× high-concentration DNA detection reagent and 5× RT-dPCR one-step RNA detection reagent
Maximum sample input	≥12 μl
Software	Calculation of copy number, copy number concentration, mutation abundance, confidence interval range, accuracy; threshold line automatic or manual division, single or unified threshold division; output excel data, two-dimensional scatter plot, two-dimensional bar chart, three-dimensional space map; automatically identify complex droplet clusters, output chip actual hole position discrimination map; data quality control function, etc. automatically generate test reports;
Data security	Permission management, auditing and electronic signature functions to ensure the validity and reliability of data and meet FDA 21 CFR Part11 compliance requirements
Power supply	220V/50Hz-60Hz
Dimension (W×D×H, mm)	Thermal cycler: 480mm×330mm×340mm, Biochip reader: 130×150×240mm
Net weight (KGS)	Thermal cycler: 8.9 , Biochip reader: 1.7

## Order Information

### Digital PCR Instrument

Name	Note	Order No.	Format
Gene amplifier	Micro-unit amplification	IN0202	1PC
Biochip reader(1 color)	Chip photo and reading	IN0308	1PC
AccuMini(1 color)	Amplifier+reader(1 color)	PL0101	1SET

### Digital PCR Reagent & Consumable

Name	Note	Order No.	Format
dPCR biochip box	Biochip version 2.0	CM0204	32T/box
Seal oil	Chip oil seal	CM0102	100T
10× Eva dye mix (including UDG)	Applied to dye method	MX0110	100T
10× probe method mix (including UDG)	Applied to probe method	MX0112	100T
One-step mix	Applied to probe method	MX0204	100T

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