

# DNA STR DETECTION KIT PRODUCT CATALOG

**Jiangsu Superbio Biomedical (Nanjing) Co., Ltd.**

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# Company Introduction

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Jiangsu Superbio Biomedical (Nanjing) Co., Ltd. (hereinafter referred to as "Superbio") was established in February 2016. Superbio has consistently focused on the independent research, development, and production of forensic DNA testing reagents and supporting products. By deeply integrating biological DNA technology with criminal investigation forensic techniques, Superbio aims to provide comprehensive DNA testing solutions. Targeting the DNA polymorphism detection and analysis application market, Superbio emphasizes the integration of relevant technologies and commercial resources to offer systematic solutions through research, development, production, sales, and service. This has led to the creation of a series of biological products applied in forensic DNA testing and analysis, public safety, criminal technology, judicial identification, scientific research, and other technological fields. Adhering to the principles of independent research and development, proprietary intellectual property, self-production, and self-service, Superbio is committed to becoming a premium service provider of forensic DNA testing system solutions.

Focusing on customer-centric values and the dedication of its employees, Superbio upholds a spirit of long-term, arduous effort and continuous learning and innovation.

Customer-centric,  
Researcher oriented  
Persist in learning, innovation  
And long-term cultivation

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# Corporate Honors

Superbio's self-developed brand "YESU" DNA test kits have provided products, services, and solutions to numerous DNA laboratories across the country, including those in public security criminal investigation, judicial institutions, research institutions, biological companies, and blood centers. Additionally, Superbio has undertaken the task of building a database of tens of millions of samples and Y chromosome data for the public security system. The products are also exported to various overseas countries, including Spain, Turkey, Macedonia, Egypt, Saudi Arabia, Vietnam, Greece, India, Nigeria, Angola, and others, receiving widespread recognition and praise from both domestic and international customers.



# 21Plex STR Detection Kit

Catalog No.A00002-A-200, 200 Reactions/Box

**20** Autosomal STRs   **13** CODIS Loci   **7** Non-CODIS Loci   **2** Low Stutter Loci   **1** Sex Locus



## High Sensitivity, High Individual Identification Rate, and High Non-Paternity Exclusion Rate

Using FRET fluorescent dyes, the kit offers higher sensitivity (0.125 ng), accuracy, and inter-color balance. It covers all STR loci in the current mainstream kits, ensuring a very high non-paternity exclusion rate and individual identification rate.



## Core and Extended Loci

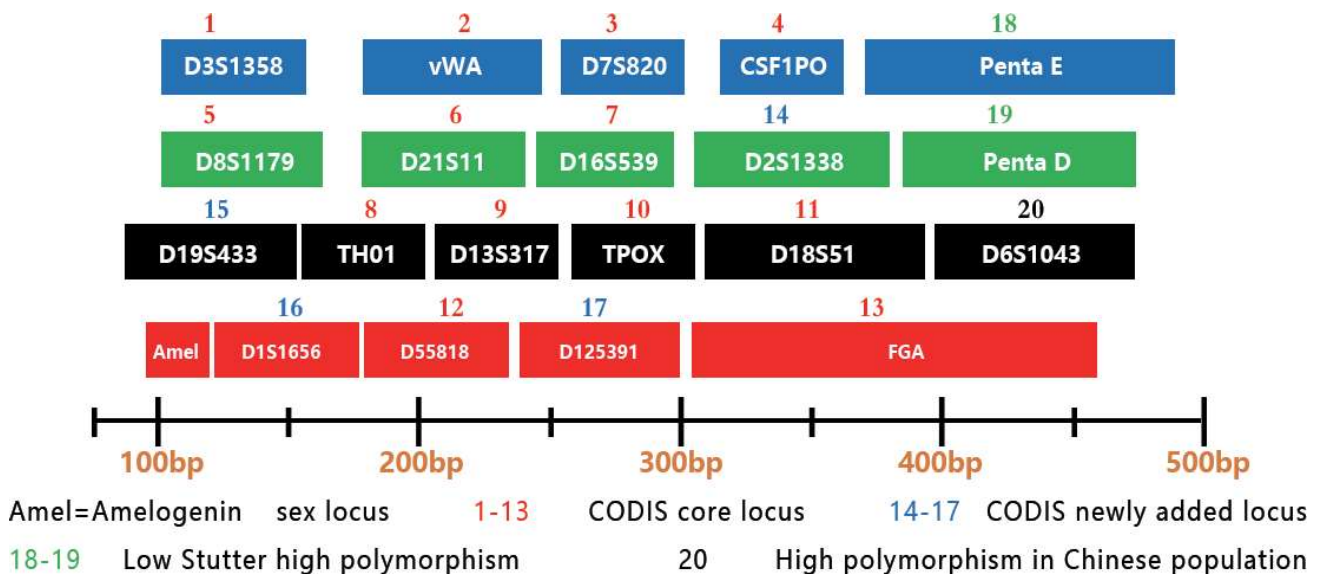
Simultaneously amplifies 20 STR loci and 1 sex locus, with 13 core loci positioned before 300 bp to ensure the priority amplification of core loci.



## High Compatibility

Suitable for direct amplification of various sample types, such as bloodstains, semen stains, saliva, hair, nails, cartilage, and other human tissues. It also supports various extraction methods, including Chelex-100, silica bead, magnetic bead, and phenol-chloroform extraction.

## 21Plex Loci Distribution Diagram





# A27Plex STR Detection Kit

Catalog No.A00028-A-200, 200 Reactions/Box

**24**

Autosomal STRs

**1**

Y-Chromosome STR

**1**

Y-Chromosome Indel

**1**

Sex Locus



## Advanced Technology

Utilizing six-color fluorescence detection technology, this kit enables the multiplex amplification and detection of 24 autosomal STRs, 1 sex locus, 1 Y-chromosome STR, and 1 Y-chromosome Indel in a single tube, significantly increasing polymorphic information content and individual identification rate.



## High Compatibility and Accuracy

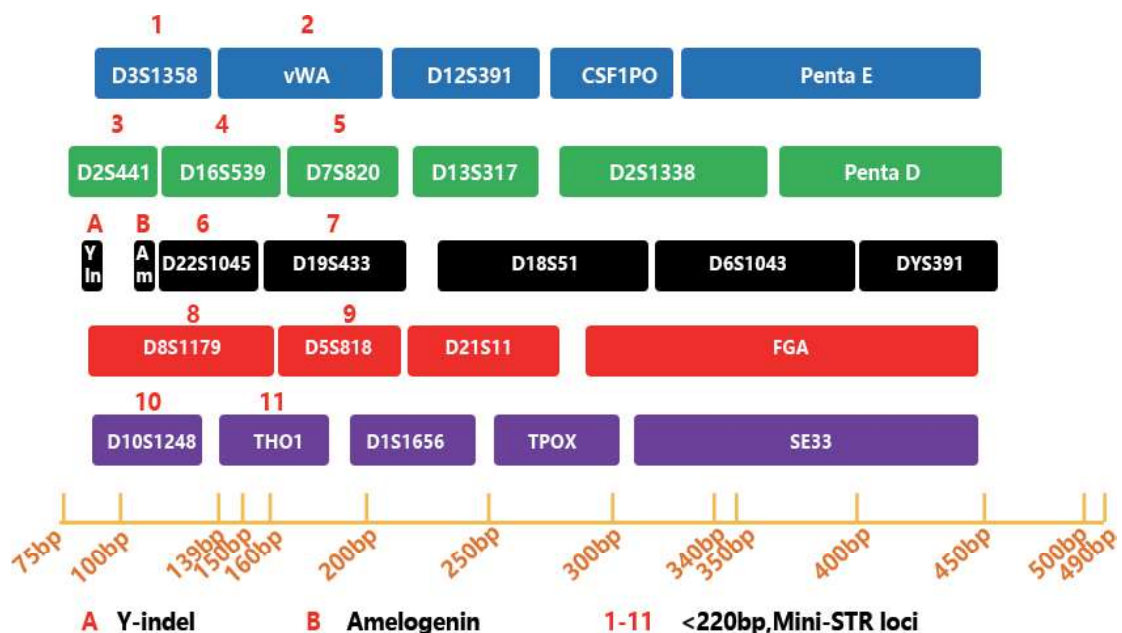
Includes 20 low-mutation-rate STR loci (mutation rate below 1%) and 7 rapidly-mutating loci (mutation rate above 1%).



## Strong Individual Identification Capability

:Contains 11 mini-STRs (amplification length less than 220bp) for autosomal loci, allowing for more locus typing when amplifying degraded samples. Suitable for male lineage investigation, it also offers strong individual identification capability.

## A27Plex Loci Distribution Diagram



# A33Plex STR Detection Kit

Catalog No.A00034-A-200, 200 Reactions/Box

**30** Autosomal STRs      **1** Y-Chromosome STR      **1** Y-Chromosome Indel      **1** Sex Locus



## Strong Individual Identification Capability

Specifically designed for domestic autosomal cases, the kit selects highly polymorphic loci suitable for the Chinese population based on allele typing of Chinese population data. It includes loci for anti-trafficking such as D8S1132, D6S477, D19S253, D3S3045, D15S659, D10S1435, as well as highly polymorphic loci like SE33, Penta D, Penta E, FGA, and D6S1043.



## High Sensitivity and Compatibility

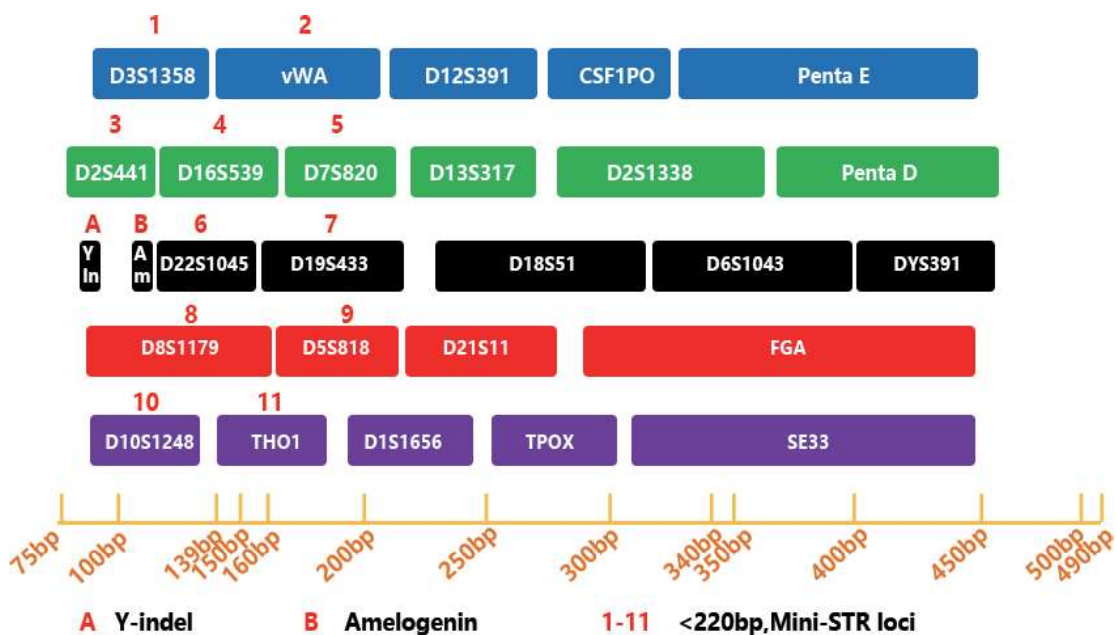
Using FRET primers, the kit offers higher sensitivity. The addition of a positive internal control (IPC) allows for rapid assessment of sample quality. It is compatible with the direct amplification of most samples and the amplification of purified DNA.



## Rapid Amplification

Suitable for anti-trafficking databases, the kit includes 12 mini-STRs (loci with amplification lengths within 220 bp), which can provide more information from degraded DNA samples. The theoretical amplification time is approximately 70 minutes, allowing for quicker clue acquisition.

## A33Plex Loci Distribution Diagram



# NC22Plex STR Detection Kit

Catalog No.A00013-A-100,100 Reactions/Box

## Five-Color Fluorescence Detection Platform

Simultaneous Multiplex Detection of 20 Supplementary Forensic Loci, 1 CODIS Locus, and 1 Sex Locus (Amelogenin)

**20**  
Loci

**1**  
CODIS Locus

**1**  
Sex Locus



### Fast speed

Featuring ultra-high resolution, sensitivity, and inhibitor resistance, this platform enables rapid amplification with an amplification time of less than 1.5 hours.



### More tested loci

When used in conjunction with our 21Plex fluorescence detection kit, the total number of detectable loci can reach up to 40.



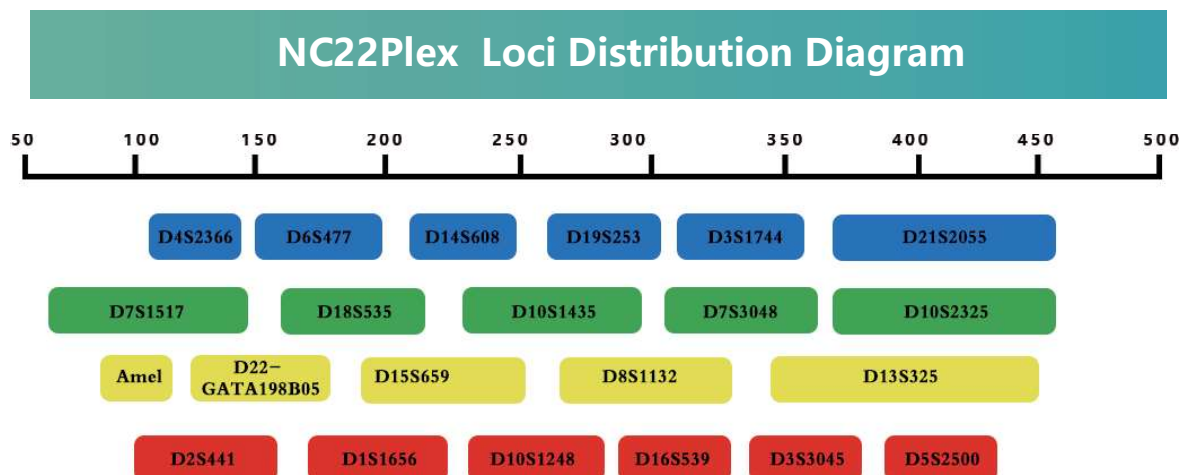
### Good compatibility

Offers high compatibility with various sample types for both direct amplification and the amplification of purified DNA.



### Wide application scope

Suitable for forensic analysis, kinship testing, and research in human genetic identification.



# A33Plex STR Detection Kit (6 Colors Case Version)

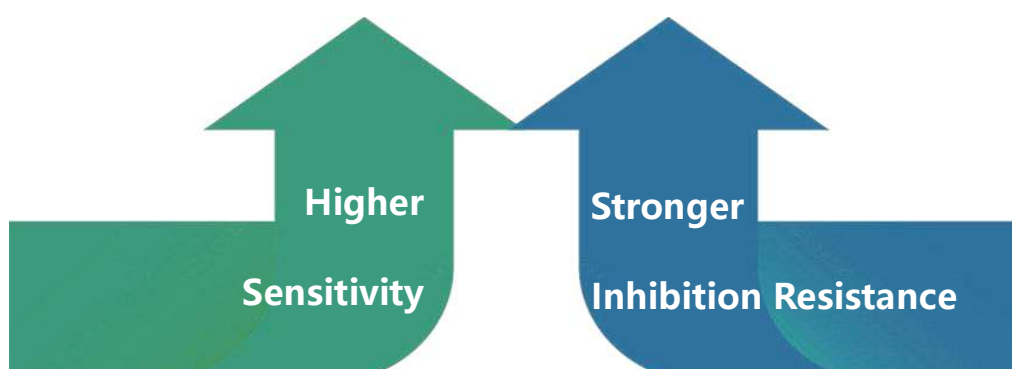
Catalog No.A00037-A-100,100 Reactions/Box

**2**  
Autosomal STRs

**1**  
Y-Chromosome  
STR

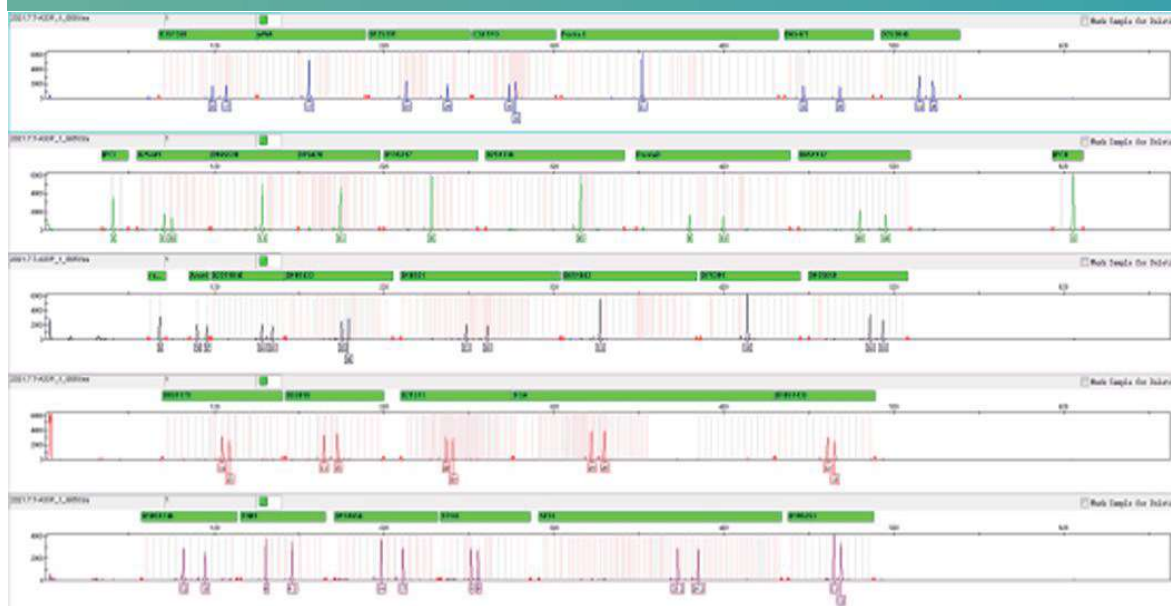
**1**  
Y-Chromosome  
Indel

**26**  
Sex Locus



Optimized for high-performance PCR amplification, this kit offers enhanced sensitivity and stronger inhibition resistance, with a minimum detection limit of 40 pg. This significantly increases the detection rate of samples containing inhibitors, enabling the extraction of more genetic information from challenging case samples, including touch, degraded, and inhibitor-containing samples. It is particularly suitable for genetic analysis of on-site biological evidence and degraded materials.

## Detection Results of A33Plex on the Genetic Analyzer Honor1816 (Samples)





# A33Plex STR Detection Kit (8 Colors Case Version)

Catalog No. A00109-A-100,100 Reactions/Box

**29**  
Autosomal Loci

**1**  
Sex Locus

**3**  
Y-Chromosome  
Indels



## Eight-Color Fluorescence Technology

The kit is based on mature eight-color fluorescence technology, which allows for the allocation of more loci compared to traditional six-color fluorescence.



## Higher Sensitivity

Using FRET fluorescent dyes, the kit offers higher sensitivity and inter-color balance, making it suitable for detecting emergency crime scene samples.



## Enhanced Performance

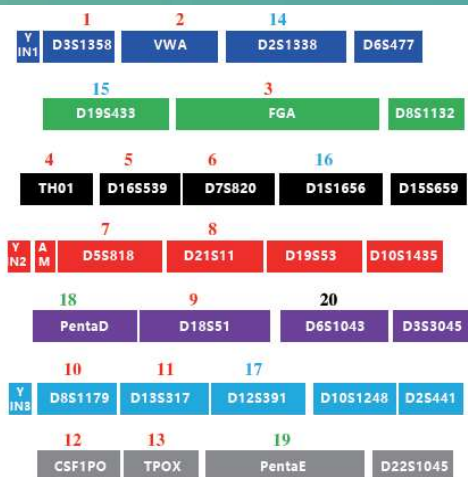
The amplification time is reduced from the traditional 90 minutes to 75 minutes, providing valuable time for the detection of genotypes in crime scene cases. The innovative Internal Positive Control (IPC) helps assess the quality of samples and the success of PCR.



## Greater Applicability

The eight-color rapid kit, with amplification fragments within 370bp, is more suitable for genotyping in crime scene cases.

### A33Plex (8 Colors Case Version) Loci Distribution Diagram



AM  
YIN1 rs771783753  
YIN2 rs199815934  
YIN3 rs759551978

1-13 CODIS core loci  
14-17 CODIS additional loci

18-19 Low stutter, high polymorphic loci  
20 Low stutter, high polymorphic loci

There are 10 Mini STR loci with fragment size less than 220bp-1,2,4,5,6,7,10,11,12,13. There are 12 fragments with size less than 220bp and 21 fragments with size less than 320bp.

<220bp

Total Probability of Discrimination Power(TDP) :0.9999999769

Parentage Testing of Duos, Duoscumulative probability of exclusion(CPE):0.9999725316

Parentage Testing of Trios, cumulative probability of exclusion(CPE):0.9971221405

<320bp

Total Probability of Discrimination Power(TDP) :0.999999999999999933634

Parentage Testing of Duos, Duoscumulative probability of exclusion(CPE):0.99999999998

Parentage Testing of Trios, cumulative probability of exclusion(CPE):0.99999979689

# Lyophilized Microsphere System



The lyophilized technology blends primers with enzyme mixtures, enabling ambient temperature transport during shipment. This process prevents repeated freeze-thaw cycles that could affect reagent performance and shelf life. To use, simply dilute with water, making it user-friendly and reducing operator requirements. For international shipments requiring long-distance transport, significant transportation costs are saved, thereby lowering kit prices.

## ► 6 Key Features

01

### Advanced Technology

Innovative lyophilized microsphere format allows for ambient temperature transport, reducing storage demands.

02

### Extended Shelf Life

Shelf life extended from 2 years to 3-5 years.

03

### Enhanced Stability

Avoids reagent degradation from freeze-thaw cycles, ensuring greater stability.

04

### Simplified Operation

Each reaction is independently packaged for easy use.

05

### Increased Efficiency

Reduces preparation steps in amplification systems, minimizing manual error and contamination risks, thus improving workflow efficiency.

06

### Enhanced Performance

Increases detection rates for trace samples by optimizing total volume sampling.



# SCIENCE TECHNOLOGY SERVES FOR PUBLIC SECURITY

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