

Fast Rat Genotyping System (Catalog# TBS4034)
Sufficient For 250 RXNS

DESCRIPTION

Fast Rat Genotyping System is designed for rapid DNA extraction and PCR amplification of from rat tail/toe/ear punch and other tissues. With this system, the DNA extraction can be performed within 10 min.

The 2x Genotyping PCR Mix contains all reagents required for PCR, including Taq DNA polymerase, dNTPs, MgCl₂, reaction buffer, tracking dye, density, PCR stabilizer and enhancer at optimal concentrations for consistent and efficient PCR amplification.

All you need is to add primers, DNA template and water, and the PCR products can be directly loaded onto electrophoresis gel for genotype analysis.

APPLICATIONS

- Rat Genotyping; DNA mutagenesis.

KIT CONTENTS

Fast DNA Extraction: 10mL

2x PCR Ready Mix: 2x 1.25 mL

Sufficient reagent for 250 x 20µL

STORAGE CONDITIONS

The kit is shipped on ice, and stored at -20°C.
 Shelf life of 12 months after receipt.

KEY FEATURES

Convenient: The system contains all components for DNA extraction and PCR amplification.

No Loading Dye Required: The PCR products can be directly loaded onto electrophoresis gel.

High Fidelity: The optimal buffer condition and specific engineered Taq DNA polymerase have increased the efficiency of PCR amplifications.

DNA EXTRACTION PROCEDURES

- 1) Cut 2-3mm of rat tail and put it to a 1.5ml tube.
- 2) Add 40 µL Extraction Solution to each tube. Spin the tube to make sure the tail sample in the solution.
- 3) Incubate tubes at 68°C for 7 min. Vortex for 5 second, Quick spin.
- 4) Add 360 µL dH₂O to each tube, vortex 5s, quick spin.
- 5) Keep the tube in boiling water or heat plate (95°C) for 3 min.
- 6) Spin at 10,000 rpm for 5 min. The DNA is in the supernatant.

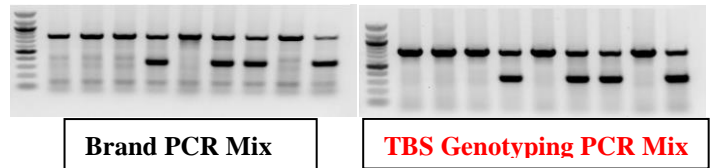
PCR PROCEDURES

For 20 µL/PCR reaction as below:

2x PCR Mix	10 µL
DNA	2 µL
Primers	1-2 µL
Water	6-7 µL

PCR conditions: 95°C, 5min→(95°C, 30S→60°C, 30S→72°C, 30S) →25-35 cycles→72°C, 5 min.

Identify the genotype: Load the PCR product onto agarose gel for genotype analysis.



Comparison between TBS Genotyping PCR and Brand PCR Mix

RELATED PRODUCTS

- Fast DNA Extraction kit (catalog# TBS6008)
- 2x PCR Blue Mix (Catalog#TBS4004)
- 2x PCR Red Mix kit (catalog# TBS4005)
- Fast Mouse Genotyping System (TBS4033)
- Fast Zebrafish Genotyping System (TBS4035)

REFERENCES

1. Birch DE. (1996): Simplified hot start PCR. Nature, 381(6581): 445-446
2. Kellogg DE et al (1994): TaqStart Antibody: "hot start" PCR facilitated by a neutralizing monoclonal antibody directed against Taq DNA polymerase. Biotechniques. 16(6): 1134-7

This product is for *in vitro* research use only and is not intended for use in humans or animals in therapeutic or diagnostic procedures.