TIANGEN®

KG121221

GMO Crop Extraction & Amplification Kit Part B

Cat. no. 4992891

Storage: Store at -20°C for 12 months.

Kit Contents:

Contents	4992891
2× GMO PCR Buffer	4 ml
GMO DNA Polymerase(2.5 U/μl)	400 U

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Introduction

This product is specially developed for GMO crop detection. The kit includes two parts: A and B. Part A of the kit provides reagents for extracting GMO crop genomic DNA, while Part B provides reagents for PCR detection of GMO crop DNA.

Part B is a two-component simple PCR reaction system, including 2×GMO PCR Buffer and GMO DNA Polymerase. GMO DNA Polymerase is an antibody modified *Taq* polymerase. The 2× GMO PCR Buffer contains $MgCl_2$, dNTPs, PCR reaction stabilizer, optimizer and enhancer as well as other components. It has the advantages of rapidness, simplicity, high sensitivity, strong specificity, good stability. Part B should be used together with Part A of this kit for PCR detection of GMO crops.

Product Components

1). 2× GMO PCR Buffer:
500 μM dNTP
20 mM Tris-HCl (pH8.3)
100 mM KCl
3 mM $MgCl_2$
Stabilizers and enhancers

2). GMO DNA Polymerase (2.5 U/μl)

Quality Control

No activity of exogenous nuclease is detected; Single-copy gene in human genome could be amplified effectively; No significant activity change when stored at room temperature for one week.

Instructions

This product is convenient and easy to use, and can avoid cross-contamination during PCR operation. The reaction only needs a proper amount of GMO DNA Polymerase and 2× GMO PCR Buffer, templates and primers, and ddH_2O to top up the volume to 1×.

Applications

Transgene detection of GMO crop

Example

Note: The following example is for reference only. The actual reaction conditions vary according to the structure of templates, primers, etc. The best reaction conditions should be set according to the actual situation.

1. Use GMO Crop Extraction and Amplification Kit (Part B) to amplify 400 bp fragments using wheat genomic DNA as a template. Reaction system: 20 μl.

Component	Volume
Template	< 500 ng
Primer 1 (10 μM)	0.4 μl
Primer 2 (10 μM)	0.4 μl
GMO DNA Polymerase (2.5 U/μl)	1 U
2× GMO PCR Buffer	10 μl
ddH_2O	Up to 20 μl

2. PCR reaction cycle set-up:

94°C 5 min
94°C 15 sec
60°C 20 sec } 35 cycles
72°C 20 sec
72°C 5 min

3. Detection results : After the reaction, take 8 μl of reaction product and detect by agarose gel electrophoresis.
Note: The experimental results show that repeated freezing and thawing of DNA templates will affect the amplification, so avoid freezing and thawing DNA templates as much as possible. For frequently used templates, please aliquot the reagents to reduce freeze-thaw times.