FastAmp® Plant Cell Lysis Solution

Manual

Catalog #	**4611**
Package Size	20 mL

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Intact Genomics, Inc.

Intact Genomics®

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FastAmp® Plant Cell Lysis Solution

Description:

FastAmp® Plant Cell Lysis Solution (1x) is designed for rapid cell lysis and DNA separation simultaneously without the need for DNA extraction steps. It contains very low concentrations of less toxic chemicals for direct DNA amplification of genomic DNA from various plant tissues. No heat treatment and no termination buffer is is required, saving significant time. FastAmp® Plant Cell Lysis Solution (1x) has been optimized with FastAmp® Plant Direct PCR kit and FastAmp® Plant Tissue/Seed Genotyping PCR kit.

Benefits:

- Simple DNA Preparation—No DNA extraction is needed
- Fast Protocol—Tissue lysis/Genomic DNA ready for PCR in 3 min
- Contains non-toxic solutions for lysis and DNA preparation
- Simple to use for single tube Multiplexing (single tube, tube strips, 96-well, or 384-well)
- Save significant time and funding (no bead or spin column, minimal hands-on time)
- Consistent results

Product Components:

FastAmp® Plant Cell Lysis Solution

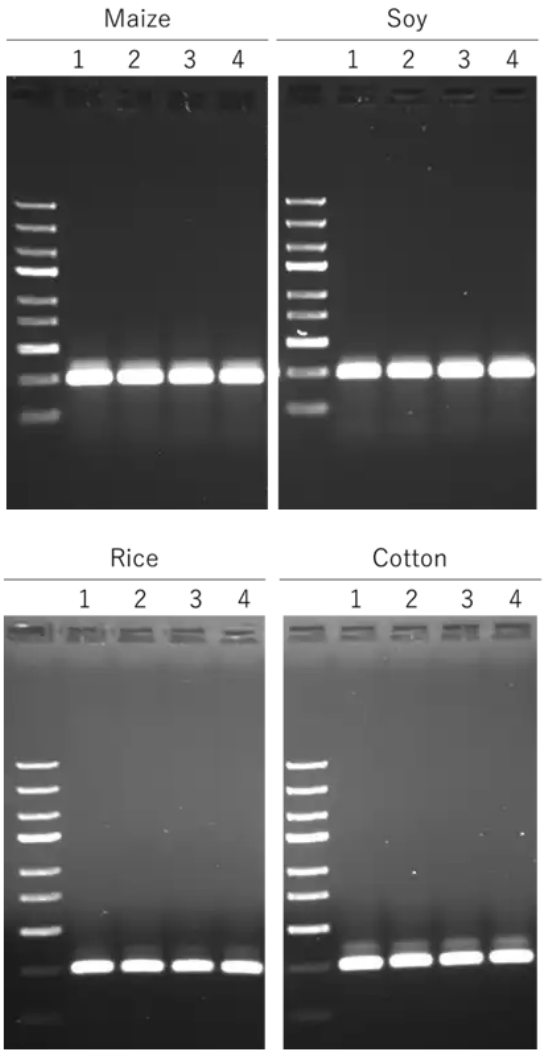
Storage:

Room Temperature

Quality Control:

FastAmp® Plant Cell Lysis Solution (1x) has been tested via Direct PCR analysis from various plant tissues, some of the results are included here. QC Data from various tissue below:

Lane 1: 25µl Buffer/5mmx5mm Leaf Tissue
Lane 2: 25µl Buffer/5mmx5mm Leaf Tissue
Lane 3: 25µl Buffer/5mmx5mm Leaf Tissue
Lane 4: 25µl Buffer/5mmx5mm Leaf Tissue
Control Primer F – AGTTCGAGCCTGATTATCCC
Control Primer R – GCATGCCGCCAGCGTTCATC



We strictly test each batch of products to ensure that they meet or exceed our published performance specifications before stocking.

General Guidelines for Sample Handling:

1.2mm punch leaf tissue should be placed directly into 8µl FastAmp® Plant Direct PCR/Genotyping Solution in PCR tube. A leaf punch can be obtained by placing the leaf puncher (i.e. Uni-Core punch by GE Healthcare, Product # WB100028, or any other commercial sources) in perpendicular position over the expanded leaf and rotating it. The tip of puncher needs to placed inside the PCR tube and expunge to drop the sample. It is critical that plant tissue materials/leaf punch is completely inside the PCR solution in tube. Occasionally, the leaf punch may stick to the side of PCR tube and therefore does not reach the bottom of tube. If this occurs, use a 10 µl pipet tip to manually drive the leaf punch to the bottom of PCR tube. This can be done right before capping the PCR tubes and starting the thermocycling program. For reusing the puncher, it is very important to clean the cutting edge properly with 70% ethanol to prevent cross-contamination between samples.

Protocol:

The reaction mix typically contains all the components needed for PCR except DNA template (leaf punch/other sources).

1. Thaw 2x master mix, Plant Direct PCR/Genotyping Solution, primers and mix thoroughly and spin down before use.
2. Place scratch leaf tissue or punch leaf tissue into 8µl FastAmp® Direct PCR/Genotyping Solution and mix thoroughly.
3. Prepare a reaction mix according to the following table:

PCR Reaction Set Up:	
Leaf punch/scratch tissue/with FastAmp® Plant Cell Lysis Solution	8.0 µL
FastAmp® Plant Direct PCR master mix (2x)	10.0 µl
Forward primer (3.2 µM)	1.0 µl
Reverse primer (3.2 µM)	1.0 µl

4. Mix the reaction mixture thoroughly.
5. Program the thermal cycler according to the manufacturer's instructions. A typical PCR cycling program is outlined in the following table:

PCR Cycling Conditions			
Steps	**Temp.**	**Time**	**Cycles**
Initial Denaturation	95 °C	8 min	1
Denaturation	95 °C	20-30 sec	35-40
Annealing	Tm-5 °C	20-30 sec	
Extension	72 °C	1 min / kb	
Final extension	72 °C	5 min	1
Hold	4-12 °C	∞	

6. Place the PCR tubes in the thermal cycler and start the cycling program.
7. Run 10.0 µl of PCR products in 1% agarose gel (120 volts for 45 min).

Troubleshooting:

No product at all or low yield
If the positive control with purified DNA is not working: • Optimize annealing temperature • Make sure the cycling protocol was performed as recommended • Increase the number of cycles up to 40

Non-specific products
• Increase annealing temperature • Shorten extension time • Decrease primer concentration • Check the purity and concentration of primers • Re-design new primers and test several pairs of primer

Related Products:

- FastAmp® Plant Direct PCR Kit (Cat.# 4612, 4615)
- FastAmp® Viral and Cell Lysis Solution (Cat.# 4630, 4631, 4633, 4636)
- GV3101 Chemically Competent Agrobacterium (Cat.# 1082- 06)
- GV3101 Electrocompetent Agrobacterium (Cat.# 1282-12)
- AGL1 Chemically Competent Agrobacterium (Cat.# 1083-06)
- AGL1 Electrocompetent Agrobacterium (Cat.# 1283-12)

Ordering Information:

- Order online within the USA. Place orders on **www.intactgenomics.com** using our secure Shopping Cart.
- Order by email, phone, or fax.
  Email: **sales@intactgenomics.com**
  Phone: (314) 942-3655 **|** Toll-free : 855-835-7172 **|** Fax: (314) 942-3656
- Order via our distributors.

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