FastAmp™ Plant Direct PCR Kit

Catalog #	Package Size	Concentration
4612	250 reactions	2x
4615	1,250 reactions	2x

Description

FastAmp™ Plant Direct PCR Kit is suitable for amplification of DNA directly from plant samples without purifying DNA. This kit is based on specially engineered *Taq* DNA polymerase, proprietary buffer system, dNTP, MgCl2 ,PCR facilitators and dye mix which makes it extremely robust and tolerant of plant PCR inhibitors such as complex polysaccharides, polyphenols and others. This kit has been tested with leaves and seeds from a wide variety of plant species. FastAmp™ Plant Direct PCR Kit includes a complete set of optimized reagents and detailed protocols making it an ideal choice for amplification of plant DNA without DNA purification.

Highlights

- Direct PCR- no need to purify DNA
- Specially engineered *Taq* DNA polymerase with highest sensitivity and specificity
- Extremely short PCR protocol times
- Master mix format with premixed gel loading dye to reduce cross-contamination and sample handling errors
- 5x magic enhancer for high GC containing DNA amplification

Applications

- Genotyping
- Transgene detection
- Knockout analysis
- Sequencing

Product Includes

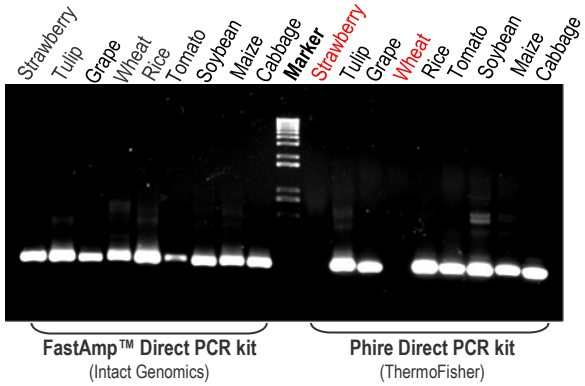
- FastAmp™ plant direct PCR master mix (2x)
- Dilution buffer
- Control primer mix (25 µM each)
- 5x magic enhancer
- Nuclease- free water

Quality Control assays

FastAmp™ Plant Direct PCR Kit has been tested with leaves and seeds from a wide variety of plant species, some of the results are included here.

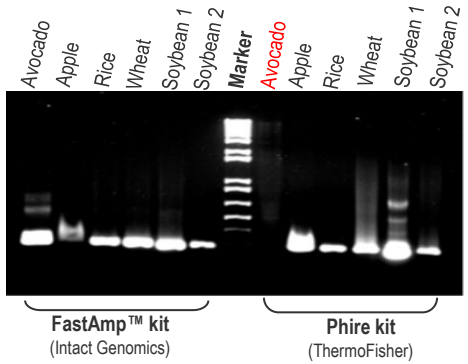
PCR with Leaves

Control Primer Mix (chloroplast) used



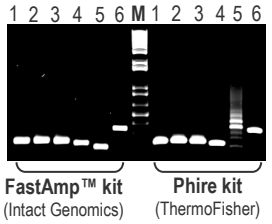
PCR with Seeds

Control Primer Mix (chloroplast) used



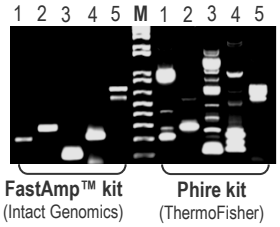
PCR with Maize

6 different primers used



PCR with Rice

5 different primers used



Protocol

1. Thaw 2x master mix, primer solutions, 5x magic enhancer (if required), mix thoroughly and spin down before use.
2. Prepare a reaction mix according to the following table. The reaction mix typically contains all the components needed for PCR except the leaf punch.*

PCR Reaction Set Up:	
Leaf punch	0.5 to 1.2 mm
FastAmp™ plant direct PCR master mix (2x)	10.0 µl
Forward primer (3.2 µM)	1 µl
Reverse primer (3.2 µM)	1 µl
5x Magic enhancer (optional)	*(4 µl)*
H_2O up to	20.0 µl

3. Mix the reaction mixture thoroughly.
4. Add leaf punch at the bottom of the individual PCR tube containing the reaction mixture.
5. Program the thermal cycler according to the manufacturer's instructions. A typical PCR cycling program is outlined in the following table.
6. Place the PCR tubes in the thermal cycler and start the cycling program.

PCR Cycling Conditions:			
Steps	**Temp.**	**Time**	**Cycles**
Initial denaturation	95 ºC	5 min	1
Denaturation	95 ºC	10-20 sec	35-40
Annealing	54-64 ºC	10-20 sec	
Extension	68-72 ºC	30-45 sec/kb	
Final extension	72 ºC	5-10 min	1
Hold	4-12 ºC	∞	

*If you use seed, grind the seed and place it into 100 µl of dilution buffer. Briefly mix the tube and incubate at 95 ºC for 5 min. Spin down and use 1-2 µl of the supernatant as a template for a 20 µl PCR reaction.

Storage Temperature

-20ºC