PCRBIOSYSTEMS
simplifying research

www.pcrbio.com

PCRBIO Rapid Extract PCR Kit

Product description

PCRBIO Rapid Extract PCR Kit combines rapid DNA extraction with fast, highly specific DNA amplification in a convenient, easy to use format. This simple, integrated extraction and amplification kit eliminates the need for laborious and time-consuming DNA extraction methods.

PCRBIO Rapid Extract PCR Kit has been developed for fast, efficient amplification of DNA from a variety of tissues and is particularly suited to solid tissue such as mouse tail or mouse ear samples. DNA extraction is performed in a single tube, removing the need for multiple washing steps. Extraction of DNA is rapid, providing DNA for PCR in 15 minutes. Extraction takes place in a single tube, minimizing potential contamination.

Extracted DNA is amplified using PCRBIO HS Taq Mix Red. Our antibody-mediated hot start polymerase and superior buffer chemistry enhance PCR speed, yield and sensitivity. The completed reaction is ready for direct gel loading without the need to add loading buffer, further reducing the handling required to go from sample to result.

Quality control

PCR Biosystems operates under an ISO 13485 certified Quality Management System. Our products are extensively tested and undergo a comprehensive, multi-step quality control process according to ISO 13485 standards, to ensure optimum performance, consistency and traceability.

Component	80 reactions	400 reactions
5x PCRBIO Rapid Extract Buffer A	1 x 1.6 mL	5 x 1.6 mL
10x PCRBIO Rapid Extract Buffer B	1 x 0.8 mL	5 x 0.8 mL
2x PCRBIO HS Taq Mix Red	2 x 1.0 mL	10 x 1.0 mL

Shipping and storage

On arrival the kit should be stored between -30 °C and -20 °C. If stored correctly, the kit will retain full activity until the indicated expiry date. The kit can be stored at 4 °C for 1 month.

Technical support

Scan or click the QR code for our primer Tm calculator and answers to frequently asked technical questions. For further technical support, please email technical@pcrbio.com with the following information:

- Amplicon size
- Reaction setup
- Cycling conditions
- Screen grabs of amplification traces and melting profile

TM CALCULATOR

FAQS

Sample amounts

Sample	Amount per 100 µL extraction	Notes
Mouse tail clip	1 to 2 mm (2.5 to 6 mg)	
Mouse ear punch	2 to 4 mm^2 (2.5 to 6 mg)	
Animal tissue	3 to 30 mg	
Hair follicle	1-10 individual follicles	
Buccal swab	1 swab	Use 300 µL of 1x extraction buffer for higher yield
Mammalian blood	2 to 8 µL Fresh/EDTA blood	2 mm^2 FTA, FTA elute or Guthrie cards
FFPE tissue	1 mm^3 or 2 mm^2 of 10 µm section	

For sample types not listed in the table above, please refer to the product FAQ section of our website (QR overleaf) or email technical@pcrbio.com to enquire about suitability of this kit.

Protocol

1. Extraction reaction setup

Create the following 1x extraction buffer:

Reagent	100 µL reaction	Notes
5x PCRBIO Rapid Extract Buffer A	20 µL	Lysis buffer
10x PCRBIO Rapid Extract Buffer B	10 µL	Protease containing buffer
PCR grade dH_2O	70 µL	

Add 100 µL of the 1x extraction buffer prepared above to each sample (300 µL for buccal swabs).

2. Extraction reaction incubation

Incubate extraction reaction for lysis, nuclease and protein denaturation, followed by heat-inactivation:

Cycles	Temperature	Time	Notes
1	75 ˚C	5 min	Vortex twice during incubation
1	95 ˚C	10 min	Deactivates protease

3. Dilute then centrifuge reaction

Add 900 µL PCR grade dH_2O to the deactivated reaction. Centrifuge at high speed in a microcentrifuge for 1 minute to pellet debris. Supernatant can be used directly in PCR or stored at -30 ˚C to -20 ˚C.

4. PCR Reaction setup

Prepare a master mix based on the following table:

Reagent	50 µL reaction	Final concentration
2x PCRBIO HS Taq Mix Red	25 µL	1x
Forward primer (10 µM)	2 µL	400 nM
Reverse primer (10 µM)	2 µL	400 nM
Supernatant from step 3	1 µL to 2 µL	variable
PCR grade dH_2O	Up to 50 µL final volume	

Cycle using conditions based on the following table:

Cycles	Temperature	Time	Notes
1	95 ˚C	1 - 2 min	Initial denaturation and enzyme activation. For colony PCR increase denaturation time to 10 minutes
40	95 ˚C 55 ˚C - 65 ˚C 72 ˚C	15 seconds 15 seconds 1 - 90 seconds	Denaturation Anneal Extension (15 seconds per kb). For multiplex PCR use 90 seconds

Analyse by agarose gel electrophoresis. The 2x mix contains a red dye for tracking during agarose gel electrophoresis. In a 2% agarose TAE gel the dye migrates at a rate equivalent to 50-100 bp of DNA. In a 1% agarose TAE gel the dye migration rate is equivalent to 200-300 bp of DNA.