

KiaDirect™ Blood PCR Kit

Cat. No. AD401

Storage: at -20°C for two years Description

KiaDirect Blood PCR SuperMix uses blood directly as template for PCR amplification. 2X KiaDirect™ PCR SuperMix (+dye) is highly resistant to various PCR inhibitors present in blood. PCR product can be directly used for gel electrophoresis.

Advantages

- Directly amplify DNA fragments from fresh blood, frozen blood and dried blood.
- Directly amplify DNA fragments from cultural cells and epithelial cells.
- Directly amplify DNA fragments from template with impurity, such as DNA from soil and feces.
- Don't need to extract DNA from blood sample.
- Avoid cross-contamination by extracting different blood samples.

Applications

- Fresh or frozen blood stored in EDTA, heparin or citric acid
- Fresh or dried blood without the anticoagulant
- PCR from mammalian cells and human oral epithelial cells
- Amplification of DNA fragment up to 4 k

Species

Mammals, birds

Recommended amount of Template for Use (for 50 µL reaction system)

Template	Treatment	Amount for Use
Human blood	No treatment needed	0.5-2 µl
Mouse blood	Dilute with water or TE before PCR	1 µl, dilution ratio at 1/10 -1/80
Bird blood	Dilute with water or TE before PCR	1 µl, dilution ratio at 1/10 -1/100
Cultured cells	Collect cells, discard culture medium by centrifugation. Suspend cell pellet with water or TE, completely remove culture medium by centrifugation. Resuspend cell pellet with proper volume of water or TE, PCR amplification with cell suspension as template	10-10 ⁵ cells
Epithelial cells	Dissolved in 50 µl water or TE	0.5-5 µl
Dried blood	Dissolve dry blood or samples containing blood (e.g. paper, clothes, etc.) into 50 µl water or TE, incubate at room temperature for 15 minutes (vortex for 2-3 times during this procedure), then heat at 95-100°C for 15 minutes. Centrifuge and collect supernatant as template for PCR.	0.5-5 µl

Kit Contents

Component	AD401-01	AD401-02
2xKiaDirect PCR SuperMix (+dye)	1 ml	5x1 ml
ddH ₂ O	5ml	25 ml

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Reaction Components

Component	Volume	Final Concentration
Template DNA	0.2-0.8 µl	as required
Forward Primer (10 µM)	0.4-0.8 µl	0.2-0.4 µM
Reverse Primer (10 µM)	0.4-0.8 µl	0.2-0.4 µM
2xKiaDirect™ PCR SuperMix (+dye)	10 µl	1X
ddH ₂ O	Variable	-
Total volume	20 µl	-

Thermal cycling conditions

94°C	5-10 min		
94°C	30 sec	}	30-40 cycles
50-60°C	30 sec		
72°C	1-2 kb/min		
72°C	5-10 min		

Notes

- Completely thaw the contents in the tube and mix well before use.
- Use of too much blood sample could inhibit the amplification, please refer to "Recommended Amount of Template for Use" to set up reaction system.
- PCR product may show turbid appearance due to denatured haemoglobin, this product can be directly used for gel electrophoresis.
If there is a need to perform following experiments (e.g. cloning, sequencing, etc.), PCR product should be purified for use.
- This kit is not recommended for use for PCR amplification of regular templates (e.g. genomic templates, cDNA, plasmid DNA templates).

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