FS Taq Mix Direct for Blood

Ref : NB-03-0126 1ml
NB-03-0127 5 x 1ml

Contents

	NB-03-0126 (40 reactions of 25 µl each)	NB-03-0127 (200 reactions of 25 µl each)
2X FS™ Mix B	1 ml	5 x 1 ml
Nuclease-Free Water	1 ml	1 ml

Description

FS™ 2X Taq Mix Direct for Blood is a premixed, ready-to-use solution containing *FS*™ Taq DNA Polymerase, dNTPs, and all other PCR components, except DNA template and primers. *FS*™ Taq Mix Direct for Blood is specific for whole blood amplification. It contributes to fast, specific, sensitive and reproducible PCR by reducing the risk of pipetting errors, miscalculation and contamination. The *FS*™ Mix (2X) B can be used with conventional PCR machines. This product cut off the process of complicated and waste time DNA extraction. Minimize the cross contamination in the reaction.

FS™ Taq DNA Polymerase is the latest generation Taq-based DNA polymerase developed. It possesses high amplification efficiency as Taq polymerase does, and fast elongation ability as KOD polymerase does, can be use in various kinds of PCR. The *FS*™ PCR Buffer is designed for *FS*™Taq DNA polymerase, can be used in fast amplification reaction. *FS*™ Taq DNA polymerase has an elongation rate 2x higher than regular Taq DNA polymerase, and can shorten the amplification time by half. It has 5' to 3' polymerase activity but lacks of 3' to 5' exonuclease activity, which results in a 3'-dA overhangs PCR product.

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Features

• **Convenient:** Direct for whole blood amplification PCR
• **High yields** of PCR products with minimal optimization
• **Fast:** saves time due to reduced number of pipetting steps
• **Reproducible:** lower contamination and pipetting error risk
• **Higher sensitivity** and fast compared to conventional Taq DNA polymerase

Applications

• Amplification for Whole Blood
• High throughput PCR
• Long and Complex template PCR

Unit Definition

One unit is defined as the amount of the enzyme required to catalyze the incorporation of 10 nM of dNTPs into an acid-insoluble form in 30 minutes at 70°C using hering sperm DNA as substrate.

Basic PCR Protocol

All solutions should be thawed on ice, gently vortexed and briefly centrifuged.

1. Add in a thin walled PCR tube on ice:

For a total 50 µl reaction volume

Component of Sample	Volume	Final Concentration
FS™ Mix B (2X)	25 µl	1X
Forward Primer	variable	0.1-1 µM
Reverse Primer	variable	0.1-1 µM
Templete	variable	10 pg-1 µg
Water Nuclease-Free	to 50 µl	---

Recommendation for Blood Template in a 50 µl reaction volume is 0.01-1 µg tissue.

2. Gently vortex the sample and briefly centrifuge to collect all drops to the bottom of

the tube.

3. Overlay the sample with mineral oil or add an appropriate amount of wax. This step may be omitted if the thermal cycler is equipped with a heated lid.

4. Preform PCR using the following thermal cycling conditions.

Initial Denaturation	94℃	4 minutes
25-35 Cycles	94℃ 55-68℃ 72℃	30 seconds 30 seconds 1 minute
Final Extension	72℃	3 minutes