gb Elite PCR Master Mix

Description of the product

gb Elite PCR Master Mix consists of hot-start Taq DNA polymerase, reaction buffer, dNTP, $MgCl_2$ and additives that prevent PCR inhibition. Taq polymerase is chemically modified DNA polymerase from Thermus aquaticus. This polymerase is completely inactive at room temperature but it is rapidly activated during the initial denaturation step of PCR.

Purpose of the product

gb Elite PCR Master Mix is intended for research PCR and real-time PCR applications with fluorescently labelled probes and with high sensitivity and efficiency request. Beneficial feature is its enhanced resistance to PCR inhibitors. It is not intended for use in diagnostics.

gb PCR Master Mix by application	gb Ideal PCR Mix
end-point PCR, common PCR amplification	
internal positive control included	
real-time PCR without probes	
real-time PCR with hydrolysis probes	✓
real-time PCR with LNA probes	
real-time PCR with low DNA samples	✓
PCR/real-time PCR with inhibited samples	✓

Available products

Cat. No.	Product	rxn
3008	gb Elite PCR Master Mix	100

1 tube contains reagents to provide 100 PCR reactions (20 µl volume of each reaction).

Parameters of the product

- Master Mix is a **2× concentrated solution.**
- It contains **all the components** necessary for PCR performance.
- It is specified especially for real-time PCR applications demanding **high sensitivity**, for example microbial DNA detection and somatic mutations detection.
- Master Mix is **enriched with components** which prevent PCR reaction inhibition through which higher reliability of the detection is ensured.
- **Polymerase is a hot-start type** with a short activation time (3 min / 95 °C), with 5′-3′ polymerase and exonuclease activity, 3′-5′ exonuclease activity is not present.

Amplification protocol

Step	Temperature	Time	Cycle number
Initial denaturation/enzyme activation	95 °C	1–2 min	1
Denaturation	95 °C	0.5–1 min	30 - 50
Annealing	Tm - 5 °C	0.5–1 min	
Extension	72 °C	1 min/kb	
Final extension	72 °C	5–15 min	1