gb IPC PCR Master Mix

Description of the product

gb IPC PCR Master Mix consists of hot-start Taq DNA polymerase, reaction buffer, dNTP, $MgCl_2$ and additives that prevent PCR inhibition and Internal positive control (IPC). IPC included in the Master Mix serves to verify that the PCR procedure was done properly. With the use of IPC it is possible to distinguish false negative DNA samples (negativity is caused by improper performance of PCR reaction or inhibition of PCR reaction) from real negative sample. The fluorescence signal of the IPC is detected in HEX/JOE/VIC channel.

Purpose of the product

gb IPC PCR Master Mix is intended for real-time PCR applications with fluorescently labelled probes and with high sensitivity and efficiency request. Its advantages are the presence of internal positive control used to check the correctness of PCR, and also increased resistance towards PCR inhibitors. It is not intended for use in diagnostics.

gb PCR Master Mix by application	gb IPC
end-point PCR, common PCR amplification	
real-time PCR without probes	
real-time PCR with hydrolysis probes	✓
real-time PCR with LNA probes	
real-time PCR with hybridization probes	
real-time PCR with High Resolution Melting Analysis	
real-time PCR with low DNA samples	✓
PCR/real-time PCR with inhibited samples	✓

Available products

Cat. No.	Product	rxn
3013	gb IPC 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 specified especially for real-time PCR applications demanding **high sensitivity**, for example microbial DNA detection.
- It is a **2× concentrated solution** which contains all the components necessary for PCR performance.
- **Internal positive control** (IPC) is included in the Master Mix solution.
- With the use of **IPC** it is possible to **distinguish** false negative DNA samples (negativity is caused by improper performance of PCR reaction or inhibition of PCR reaction) from real negative sample.
- **The fluorescence signal of the IPC** is detected in HEX/JOE/VIC channel.
- Master Mix is enriched with components which **prevent PCR reaction inhibition** through which higher reliability of the detection is ensured.
- **Polymerase** included in the Master Mix 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