

# gb SG PCR Master Mix

## Description of the product

gb SG PCR Master Mix consists of hot-start Taq DNA polymerase, reaction buffer, dNTP, MgCl<sub>2</sub>, sybrgreen 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 SG PCR Master Mix is intended for real-time PCR analysis using the fluorescent dye in the FAM channel instead of fluorescently labelled probe. gb SG PCR Master Mix can also be used for the end-point PCR analysis. Beneficial feature is enhanced resistance to PCR inhibitors. It is not intended for use in diagnostics.

gb PCR Master Mix by application	gb SG
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
3005	gb SG PCR Master Mix	100

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

## Parameters of the product

- gb SG PCR Master Mix is a **2× concentrated solution**.
- It contains **all the components** necessary for PCR performance.
- Due to its special composition there is **an increased resistance to PCR inhibitors**.
- It is suitable for PCR performance detection with the help of SYBR Green I (included in the Master Mix).
- **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.
- Individual features of **Master Mixes** from our offer for your **comparison** can be found on our webpages.

## Amplification protocol

Step	Temperature	Time	Cycle number
Initial denaturation/enzyme activation	95 °C	1–2 min	1
Denaturation	95 °C	0.5–1 min	
Annealing	T <sub>m</sub> - 5 °C	0.5–1 min	30 - 50
Extension	72 °C	1 min/kb	
Final extension	72 °C	5–15 min	1
Melting step can be added			