Steinbrenner Laborsysteme GmbH

primaAMP

HotStart Taq DNA Polymerase with 10x PCR Buffer

Article	Content
SL-9701/02-smp	200 U, 200 rxn × 20 µl
SL-9701/02-500	500 U, 500 rxn × 20 µl
SL-9701/02-2500	5 × 500 U, 2500 rxn × 20 µl
SL-9701/02-10000	20 × 500 U, 10000 rxn × 20 µl

Long-Term Storage
at -20°C in the dark

Short-Term Storage
at 4°C in the dark

DESCRIPTION

Our **primaAMP HotStart Taq DNA polymerase** is a recombinant, thermostable Taq from Thermus aquaticus. It possesses a 5' to 3' polymerase activity as well as a 5'-flap endonuclease activity.

The **primaAMP** Taq DNA polymerase can be used to amplify DNA fragments up to a length of 5 kb. Moreover, it generates A (adenine) overhangs at the 3' end, which can be used for TA-cloning.

The optimized 10x PCR buffer contains potassium chloride as well as ammonium sulfate and allows the amplification of difficult templates (e.g GC-rich).

The polymerase is available with **two different 10x PCR Buffer**. The **red 10x PCR buffer includes a DNA loading dye** and can be used to directly load the PCR sample onto agarose gels after cycling.

DID YOU KNOW?

- primaAMP is also available as a ready-to-use 2x PCR Master Mix.
- For a Master Mix without HotStart polymerase, please order SL-9601/02.

VERSION **1.0 – 06 / 2022**

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Recommended Reaction Mixture

BEFORE YOU START

- After thawing, please **invert the component tubes 6-8 times**.
- **Do not vortex** the reaction mixture to avoid damaging the enzyme.

Component	20 µl Reaction	10 µl Reaction	Final Concentration
10x PCR Buffer (red or colourless)	2 µl	1 µl	1x
primaAMP HotStart Polymerase	0.2 µl	0.1 µl	1.25 U
Forward Primer	variable (e.g. 2 µl)	variable (e.g. 1 µl)	100 - 400 nM
Reverse Primer	variable (e.g. 2 µl)	variable (e.g. 1 µl)	100 - 400 nM
dNTPs (dATP, dCTP, dGTP, dTTP)	variable	variable	200 µM each
Template DNA	variable	variable	0.01 - 10 ng per reaction
Sterile Water	adjust to 20 µl	adjust to 10 µl	-

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Suggested Cycling Conditions

Step	Time	Temperature
Initial Denaturation	3 minutes	92°C - 95°C
25 - 35 cycles		
Denaturation	5 - 10 seconds	92°C - 95°C
Annealing	5 - 10 seconds	55°C - 68°C **depends on primer**
Extension	5 - 30 seconds per 1 kb amplicon length	72°C

NOTE

- The optimal annealing temperature is usually 2°C - 5°C below the primer melting temperature.
- Recommended elongation time is 5 - 30 seconds per 1 kb of amplicon length. For more complicated templates, we suggest 45 seconds for elongation.
- For maximum yield and specificity , we recommend to optimize annealing temperatures, annealing time, extension time, and the number of cycles should be optimized and the number of cycles for each template and primer pair.

Contents

Article	Components	Description
SL-9701	SL-9701	HotStart Taq DNA Polymerase
	SL-9001	10x PCR Buffer, colourless
SL-9702	SL-9701	HotStart Taq DNA Polymerase
	SL-9002	10x PCR Buffer, red; ready-to-load

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Further Information

For more information, please visit our website: **www.steinbrenner.de**

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Further Products

Products that may also be interesting to you

primaDIRECT PCR

- Direct-PCR without DNA extraction
- From sample to PCR in 15 minutes
- For cell culture, tissue, plants, mouse tails/ear, meat

primaPROOF HIGH-FIDELITY

- High-fidelity / proofreading PCR
- For NGS and cloning