Article	Reactions
SL-9401-200U	200 Units (4U/µL)
SL-9401-1000U	1000 Units at (4U/µL)
SL-9411-1	1.25 mL, 100 rxn á 25µL
SL-9411-5	5 mL, 400 rxn á 25µL

Storage Conditions
Long-Term Storage
at -20 °C in the dark *(stable for about 12 months)*
Short-Term Storage
at 4 °C in the dark *(stable for about 2 months)*

primaPROOF *HIGH-FIDELITY*

High-Fidelity Proofreading Polymerase & High-Fidelity 2x Master Mix

DESCRIPTION

The primaPROOF High-Fidelity polymerase allows for the amplification of fragments up to 5 kb. With its proofreading capability, it is ideally for cloning, genotyping and sequencing applications in which the error-free amplification of targets is required. The available 2x Master Mix formulation (SL-9411) is ready-to-use and only requires the addition of DNA template and primers.

KIT CONTENT

SL-9401	SL-9411
primaPROOF Polymerase	**primaPROOF** 2x Master Mix
primaPROOF Buffer	

FURTHER INFORMATION

For more information, please visit our website

https://www.steinbrenner-laborsysteme.de

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PCR CYCLING CONDITIONS

BEFORE YOU START

- After thawing up, please **invert the polymerase / Master Mix tube 6-8 times.**
- **Do not vortex** the enzyme or Master Mix to prevent damage to the enzyme.

Step	Time	Temperature
Initial Denaturation	3 minutes	92 °C - 95 °C
25- 35 cycles		
Denaturation	5 - 10 seconds	92 °C - 95 °C
Annealing	5 - 20 seconds	55 °C - 68 °C
Extension	variable, depends on fragment length **30 - 60 seconds per 1 kb** fragment length	72 °C

NOTES

- Usually the optimal annealing temperature is 2 °C - 5 °C below the primer melting temperature.
- Recommended elongation time is 30 to 60 seconds per 1 kb of amplicon, but depends on the amplicon complexity.
- For maximum yield and specificity, both annealing temperatures and extension times should be optimized for each primer pair.

RECOMMENDED REACTION MIXTURE

Polymerase with separate buffer

Components	25 µL Reaction	Final Concentration
10x primaPROOF Buffer	2.5 µL	1x
primaPROOF Polymerase	0.25 µL	1x
Forward Primer	variable (e.g. 2 µL)	100 - 400 nM
Reverse Primer	variable (e.g. 2 µL)	100 - 400 nM
dNTP Mix	**variable**	**200** µM
Template DNA	**variable**	**0.1 - 10 ng/reaction**
Sterile Water	**adjust to 25 µL**	

2x primaPROOF Master Mix

Components	25 µL Reaction	Final Concentration
2x primaPROOF Master Mix	12.5 µL	1x
Forward Primer	variable (e.g. 2 µL)	100 - 400 nM
Reverse Primer	variable (e.g. 2 µL)	100 - 400 nM
Template DNA	**variable**	**0.1 - 10 ng/reaction**
Sterile Water	**adjust to 25 µL**	

! NOTE

› For difficult templates you can add DMSO in low concentrations (1-7 %)