DATA SHEET

Taq High Fidelity Pol Master Mix 2X - Green

Master mix of Thermostable DNA polymerase for high accuracy for direct gel loading

Cat. Nº.	Amount
☐ POL-119XS	50 reactions
☐ POL-119S	100 reactions
☐ POL-119M	200 reactions
■ POL-119L	500 reactions
☐ POL-119XL	1.000 reactions

Shipping:
Shipped on blue ice

Storage Conditions:
Store at -20 °C

Additional Storage Conditions:
Avoid freeze/thaw cycles. Taq High Fidelity Pol – Master mix (2X) is also stable for three months at 4°C, so for frequent use, an aliquot may be kept at 4°C.

Shelf Life:
24 months

For *in vitro* use only!

Description:
Taq High Fidelity Master Mix contains Taq High Fidelity Polymerase in an optimized PCR buffer with Mg^{2+} and dNTPs. The master mix is supplemented with tracking dyes for direct loading of PCR products on gels. It contains all reagents required for PCR (except template and primer) in a premixed 2x concentrated ready-to-use solution. The Master Mix is recommended for use in routine PCR reactions. It is optimized for high specificity and guarantees minimal by-product formation. The tracking dyes in the master mix do not interfere with PCR performance and are compatible with downstream applications such as fluorescent automatic DNA sequencing, ligation, and restriction digestion.

Kit contents:
2x Taq High Fidelity Pol Master Mix (purple cap)
Master mix of thermostable DNA polymerase for high accuracy, dATP, dCTP, dGTP, dTTP, KCl, $MgCl_2$ and stabilizers.

PCR Reaction Setup

Use the quantities below to prepare a single 50 µl PCR reaction. Thaw, mix, and briefly centrifuge each component before use. Add the following components to a microcentrifuge tube:

1. Prepare PCR master mix

Note: Consider the volumes for all components listed next steps to determine the correct amount of water required to reach your final reaction volume.

Components	50 µL rxn	[final]
Water, grade PCR	To 50 µl	
2 X Taq High Fidelity Master Mix	25 µl	1X

Mix and briefly centrifuge the components.

2. Add template DNA and primers

Components	50 µL rxn	[final]
Foward primer (10 µM)	0,5 - 2,5 µl	0,1 – 0,5 µM
Reverse primer (10 µM)	0,5 - 2,5 µl	0,1 – 0,5 µM
DNA template		10 pg – 1 µg**

**genomic DNA: 1 ng-1µg; plasmidial ou viral DNA: 1 pg-1 ng

Cap each tube, mix, and briefly centrifuge the content.

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3. Incubate reactions in a thermal cycler.

Recommended cycling conditions:

Step		Temp.	Time
Initial denaturation		95 °C	1 min - 3 min
30 cycles	Denaturation	95 °C	15 - 30 sec
	Annealing [1]	45-70 °C	15 - 30 sec
	Elongation [2]	72 °C	1 min/kb
Final extension		72 °C	1-2 min/kb
Hold		4 - 10 °C	

1)The annealing temperature depends on the melting temperature of the primers used.

2)The elongation time depends on the length of the fragments to be amplified. A time of 1 min/kb is recommended.

Note: for large fragments it is recommended, in the elongation step, to use 68 °C and 1,5 - 2 min/kbp.

For optimal specificity and amplification an individual optimization of the recommended parameters may be necessary for each new template DNA and/or primer pair.