DATA SHEET

Hot Start Taq Pol Master Mix (2X)

Master mix of Hot Start Taq Polymerase

Cat. Nº.	Amount
☐ POL-116XS	50 reactions
☐ POL-116S	100 reactions
☐ POL-116M	200 reactions
☐ POL-116L	500 reactions
☐ POL-116XL	1.000 reactions

Shipping:
Shipped on blue ice

Storage Conditions:
Store at -20 °C

Additional Storage Conditions:
Avoid freeze/thaw cycles. Hot Start Taq 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:
12 months

For *in vitro* use only!

Description:
Hot Start Taq Pol Master Mix contains Hot Start Taq Polymerase in an optimized PCR buffer with Mg^{2+} and dNTPs. 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. Antibody-based hot start technology avoids nonspecific amplification and enables room temperature reaction setup. The engineered Taq DNA Pol hot start enzyme allows amplification of fragments up to 5 kbp.

Kit contents:

2x Hot Start Taq Pol Master Mix (purple cap)
Master mix of thermostable Hot Start DNA polymerase, 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 Hot Start Taq Pol 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
30 cycles	Denaturation	95 °C	15 - 30 sec
	Annealing [1]	45-68 °C	15 - 30 sec
	Elongation [2]	72 °C	30 sec - 4 min
Final extension		72 °C	2 min
Hold		4 - 8 °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.

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