SOLIS BIODYNE

Data Sheet

HOT FIREPol® Blend Master Mix with 12.5 mM $MgCl_2$, 5x

Cat. No.	Pack Size	20 µl rxn
04-27-00S25	0.1 ml	25
04-27-00125	1 ml	250
04-27-00125-5	5 x 1 ml	1250
04-27-00125-10	10 x 1 ml	2500
04-27-02025	20 ml	5000

For *in vitro* use only

Description:
HOT FIREPol® Blend Master Mix is a 5x-concentrated ready-to-use solution containing all reagents required for PCR except template, primers and water.

HOT FIREPol® Blend Master Mix contains two carefully optimized enzymes – HOT FIREPol® DNA polymerase and a proofreading polymerase. This enzyme blend has both the 5' flap endonuclease activity as well as the 3'→5' proofreading activity. HOT FIREPol® Blend Master Mix exhibits an increased fidelity (up to five-fold) compared to HOT FIREPol®. Generated PCR products are compatible with blunt-end and TA cloning procedures (to increase the blunt end cloning efficiency treat the PCR products with T4 DNA polymerase or DNA polymerase I large Klenow fragment prior to cloning).

Applications:
- Hot Start PCR

Mix Composition:
- **HOT FIREPol® DNA polymerase**
- **Proofreading enzyme**
- **5x Blend Master Mix Buffer**
- **12.5 mM $MgCl_2$**
  1x PCR solution – 2.5 mM $MgCl_2$
- **1 mM dNTPs of each**
  1x PCR solution – 200 µM dATP, 200 µM dCTP, 200 µM dGTP and 200 µM dTTP
- **BSA**

Shipping and Storage conditions:
Routine storage: -18ºC to -28ºC
Shipping and temporary storage for up to 1 month at room temperature or storage for up to 6 months at 2–8ºC has no detrimental effects on the quality of the product.

Manufactured by Solis BioDyne in compliance with the ISO 9001 and ISO 13485 certified Quality Management System.

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

Recommendations:
Reaction setup at room temperature.
We recommend using HOT FIREPol® Blend Master Mix (5x) in any PCR application that will be visualized by agarose gel electrophoresis and ethidium bromide staining.

In order to prevent contamination, we recommend you to setup the reaction under laminar or in PCR box.

Recommended PCR reaction mix:

Component	Volume	Final conc.
HOT FIREPol® Blend Master Mix (5x)	4 µl	1x
Forward primer (10 µM)	0.2–0.6 µl	0.1–0.3 µM
Reverse primer (10 µM)	0.2–0.6 µl	0.1–0.3 µM
DNA template	variable	variable[1]
H_2O	Up to 20 µl	

[1] Conc. of cDNA 0.01 pg/µl–0.1 ng/µl; gDNA 0.1 ng/µl–10 ng/µl

Recommended PCR cycling protocol:

Operation	Temp.	Time	Cycles
Initial activation[2]	**95ºC**	**12–15 min**	1
Denaturation	95ºC	10–20 s	25–30
Annealing[3]	54–66ºC	30–60 s	
Elongation[4]	72ºC	20 s–4 min	
Final elongation	72ºC	5–10 min	

[2] To activate the polymerase, include an incubation step **at 95ºC for 12–15 minutes** at the beginning of the PCR cycle.

[3] The annealing temperature (Ta) depends on the melting temperature (Tm) of the primers. A Ta that is about 2 to 5°C lower than the Tm of the primers is generally suitable. Performing temperature gradient is recommended.

[4] Extension time depends on the length of the fragment to be amplified. A time of 1 min/kb is recommended.

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Safety warnings and precautions:
This product and its components should be handled only by persons trained in laboratory techniques. It is advisable to wear suitable protective clothing, such as laboratory overalls, gloves and safety glasses. Care should be taken to avoid contact with skin or eyes. In case of contact with skin or eyes, wash immediately with water. Refer to Safety Data Sheet for more information

Technical support:
Contact your sales representative for any questions or send an email to support@solisbiodyne.com

Online chat is available at www.solisbiodyne.com

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