SOLIS BIODYNE

Data Sheet

HOT FIREPol® Blend Master Mix with 10 mM $MgCl_2$, 5x

Cat. No.	Pack Size	20 µl rxn
04-27-00S20	0.1 ml	25
04-27-00120	1 ml	250
04-27-00120-5	5 x 1 ml	1250
04-27-00120-10	10 x 1 ml	2500
04-27-02020	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**
- **10 mM $MgCl_2$**
  1x PCR solution – 2 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 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]
Add 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.

Solis BioDyne
Teaduspargi 9, 50411 Tartu, Estonia, tel: +372 740 9960, fax: +372 740 2079, e-mail: info@solisbiodyne.com, www.solisbiodyne.com

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

DS-04-27-100 v2
Revised 18.06.2021

Permitted Use: This product is supplied for research use only (the **Permitted Use**). If the customer wishes to use the product for any purpose other than the Permitted Use, including (without limitation) resale or alteration, the customer should obtain the appropriate licence from Solis Biodyne. Some applications of this product may require a license/licenses from one or more third parties which are not provided by the purchase of this product. Users should obtain the licence if required. Covered by the patent EP2501716, made by the methods of US Patent No 9,321,999.

Trademark information: FIREPol® is an EU registered trademark of Solis BioDyne OÜ.

Warranty and Disclaimer: This product shall comply with its relevant specification and be fit for its stated purpose, but Solis BioDyne gives no other warranty and makes no representation as to description or quality. Any such warranty or representation is excluded, to the fullest extent permitted by law. In particular, but without limiting the foregoing, Solis BioDyne shall not be liable for the failure of the product to comply with its relevant specification where such failure arises as a result of: (i) customer negligence or because the customer failed to follow any of the applicable technical data or safety sheets, standard user materials, use guidelines or any other information provided by Solis BioDyne as to the storage, transportation, handling, use or maintenance of the products or other good practice regarding the same, or (ii) the customer altering the products in any way without the prior written consent from Solis BioDyne, or (iii) the products differing from the relevant specification as a result of changes made to ensure their compliance with applicable statutory or regulatory requirements.

Nothing shall limit or exclude Solis BioDyne's liability for death or personal injury caused by its negligence, fraud or fraudulent misrepresentation or any matter in respect of which it would be unlawful for Solis BioDyne to exclude or restrict liability. Without limiting the foregoing, Solis BioDyne shall under no circumstances whatever be liable to the customer, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any loss of profit, or any indirect or consequential loss arising under or in connection with the products and Solis BioDyne's total liability to the customer in respect of all other losses arising under or in connection with the product, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, shall in no circumstances exceed the price of the products supplied in respect of which the liability has arisen.

Solis BioDyne
Teaduspargi 9, 50411 Tartu, Estonia, tel: +372 740 9960, fax: +372 740 2079, e-mail: info@solisbiodyne.com, www.solisbiodyne.com