SOLIS BIODYNE

Data Sheet

FIREPol® Master Mix Ready to Load 7.5 mM $MgCl_2$, 5x

Cat. No.	Pack Size	20 µl
04-12-00S15	0.1 ml	25
04-12-00115	1 ml	250
04-12-00115-5	5 x 1 ml	1250
04-12-00115-10	10 x 1 ml	2500

For *in vitro* use only

Description:

FIREPol® Master Mix Ready to Load is a 5x-concentrated ready-to-use solution containing all reagents required for PCR (except template, primers and water), additional compound needed for direct loading onto agarose gel and two tracking dyes (blue and yellow) that allow to monitor progress during electrophoresis.

Applications:

- Suited for a wide range of PCR assays

Mix Composition:

- **FIREPol® DNA polymerase**
- **5x Reaction Buffer B**
  0.4 M Tris-HCl, 0.1 M $(NH_4)_2SO_4$, 0.1% w/v Tween-20
- **7.5 mM $MgCl_2$**
  1x PCR solution – 1.5 mM $MgCl_2$
- **1 mM dNTPs of each**
  1x PCR solution – 200 µM dATP, 200 µM dCTP, 200 µM dGTP and 200 µM dTTP
- **Blue dye**
  Migration equivalent to 3.5–4.5 kb DNA fragment
- **Yellow dye**
  Migration equivalent to 35–45 bp DNA fragment
- **Compound that increases sample density for direct loading**

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:

We recommend using FIREPol® Master Mix Ready to Load (5x) in any PCR application that will be visualized by agarose gel electrophoresis and ethidium bromide staining.

FIREPol® Master Mix Ready to Load (5x) is not recommended for use in applications where spectrophotometric measurements (absorbance or fluorescence) are necessary because yellow and blue dyes can interfere with these applications.

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.
FIREPol® Master Mix Ready to Load (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 denaturation[2]	**95ºC**	**3–5 min**	1
Denaturation	95ºC	15–30 s	25–30
Annealing[3]	54–66ºC	30–60 s	
Extension[4]	72ºC	40 s–4 min	
Final extension	72ºC	5–10 min	

[2] Complex templates, such as gDNA, require longer time to denature (5 min). With low complexity templates (i.e. lambda, plasmid DNA), initial denaturation time can be reduced to 3 min.

[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

DS-04-12-75 v2
Revised 18.06.2021