Solis BioDyne
Data Sheet

5x FIREPol® Master Mix Ready to Load

(7.5 mM $MgCl_2$)

Cat. No.	Pack Size	Conc. ($MgCl_2$)
04-12-00S15	0.1 ml SAMPLE (25 reactions)	7.5 mM
04-12-00115	1 ml (250 reactions)	7.5 mM

For *in vitro* use only

Description:

5x FIREPol® Master Mix Ready to Load is a premixed 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

Reagent 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 rate in excess of primers in 1% agarose gel: <35-45 bp
- **Compound that increases sample density for direct loading**

Shipping and Storage conditions:

Routine storage: -20ºC
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 5x FIREPol® Master Mix Ready to Load.

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.

Recommended PCR reaction mix:

Component	Volume	Final conc.
5x FIREPol® Master Mix Ready to Load	4 µl	1 x
Forward primer (10 pmol/µl)	0.2-0.6 µl	0.1-0.3 µM
Reverse primer (10 pmol/µl)	0.2-0.6 µl	0.1-0.3 µM
Template DNA	x µl	5-50 ng/µl
Add H_2O	Up to 20 µl	

Recommended PCR cycles:

Operation	Temp.	Time	Cycles
Initial denaturation	**95ºC**	**3-5 min**	1
Denaturation	95ºC	20-40 s	25-30
Annealing	54-66ºC	30-60 s	
Elongation	72ºC	40 s - 4 min	
Final elongation	72ºC	5-10 min	

Recommendations:

We recommend using 5x FIREPol® Master Mix Ready to Load in any PCR application that will be visualized by agarose gel electrophoresis and ethidium bromide staining.
We do not recommend using the 5x FIREPol® Master Mix Ready to Load for PCR reactions where detergent free buffer system is required (detergent free 5x Master Mix available upon request).
5x FIREPol® Master Mix Ready to Load 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.

Some applications this product is used in may require a license which is not provided by the purchase of this product. Users should obtain the license if required.

Related products:

Product name	Pack size	Cat. No.
FIREPol® DNA Polymerase	500 U	01-01-00500
FIREPol® DNA Polymerase	1000 U	01-01-01000
FIREPol® DNA Polymerase	2000 U	01-01-02000
HOT FIREPol® DNA Polymerase	500 U	01-02-00500
HOT FIREPol® DNA Polymerase	1000 U	01-02-01000
5x FIREPol® Master Mix *(1.5 mM $MgCl_2$ final conc.)*	250 reactions	04-11-00115
5x FIREPol® Master Mix *(2.5 mM $MgCl_2$ final conc.)*	250 reactions	04-11-00125
dNTP MIX *(20 mM of each)*	20 µmol	02-31-00020
dNTP MIX *(20 mM of each)*	100 µmol	02-31-00100
dNTP SET *(100 mM)*	4 x 25 µmol	02-21-00100
dNTP SET *(100 mM)*	4 x 100 µmol	02-21-00400

Solis BioDyne
Riia 185a, 51014 Tartu, Estonia, tel: +372 740 9960, fax: +372 740 2079, e-mail: solis@sbd.ee, www.sbd.ee