



5x FIREPol® Master Mix (7.5 mM MgCl₂)

Cat. No.	Pack Size	Conc. (MgCl ₂)
04-11-00S15	0.1 ml SAMPLE (25 reactions)	7.5 mM
04-11-00115	1 ml (250 reactions)	7.5 mM

For *in vitro* use only

Description:

5x FIREPol® Master Mix is a premixed ready-to-use solution containing all reagents required for PCR (except template, primers and water).

Applications:

- Suited for a wide range of PCR assays
- TA cloning

Reagent Composition:

- FIREPol® DNA polymerase
- 5x Reaction Buffer B
0.4 M Tris-HCl, 0.1 M (NH₄)₂SO₄, 0.1% w/v Tween-20
- 7.5 mM MgCl₂
1 x PCR solution – 1.5 mM MgCl₂
- 1 mM dNTPs of each
1 x PCR solution – 200 μM dATP, 200 μM dCTP, 200 μM dGTP and 200 μM dTTP

Shipping and Storage conditions:

Routine storage: -20°C

Shipping and temporary storage for up to 1 month at room temperature or storage for up to 6 months at 2-8°C has no detrimental effects on the quality of 5x FIREPol® Master Mix.

Recommended PCR reaction mix:

Component	Volume	Final conc.
5x FIREPol® Master Mix	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
DNA template ¹	variable ¹	variable ¹
H ₂ O	Up to 20 μl	

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

Recommended PCR cycles:

Operation	Temp.	Time	Cycles
Initial denaturation	95°C	3-5 min	1
Denaturation	95°C	15-30 s	25-30
Annealing	54-66°C	30-60 s	
Elongation ²	72°C	40 s - 4 min	
Final elongation	72°C	5-10 min	

² Elongation time should be ~1 min/1 kb.

Recommendations:

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

We do not recommend using the 5x Master Mix for PCR reactions where detergent free buffer system is required (detergent free 5x Master Mix available upon request).

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

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.

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 Ready to Load (1.5 mM MgCl ₂ final conc.)	250 reactions	04-12-00115
5x FIREPol® Master Mix Ready to Load (2.5 mM MgCl ₂ final conc.)	250 reactions	04-12-00125
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

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