

# 2x Tamix Fast SyGreen Mix Hi-ROX

Order number: **TA20.12-05**

## Product description:

Combined with the latest advancements in polymerase technology and advanced buffer chemistry Tamix SyGreen Mix offers market leading performance with minimal optimisation. Tamix SyGreen Mix uses a proprietary intercalating dye which does not inhibit PCR, unlike other popular dyes.

Tamix SyGreen Mix uses proprietary small molecular inhibitor technology that prevents formation of primer-dimers to improve reaction sensitivity and specificity.

High-throughput screening has resulted in a buffer system that allows efficient amplification from GC-rich and AT-rich templates, under fast and standard cycling conditions.

	Format	Pack Size
	5 x 1 ml	2x ReadyMix 500 x 20 µl rxns

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## Shipping and Storage

On arrival the kit should be stored at -20°C. Avoid prolonged exposure to light. If stored correctly the kit will retain full activity for 12 months. The kit can be stored at 4°C for 1 month. The kit can go through 30 freeze/thaw cycles with no loss of activity.

## Limitations of product use

The product may be used only for in vitro research purposes.

## Technical support

For technical support and troubleshooting please email us the following information:

Amplicon size  
Reaction setup  
Cycling conditions  
Screen grabs of amplification traces and melting profile

## Instrument compatibility

Hi-ROX	Lo-ROX	Instrument	Manufacturer
Yes	Yes	qTower	Analytica Jena
No	Yes	7500, 7500 FAST, Via7™	Applied Biosystems
Yes	No	7000, 7300, 7700, 7900, 7900HT, 7900HT FAST, StepOne™, StepOne™ Plus	Applied Biosystems
No	Yes	iCycler®, MyiQ®, iQ™5, Opticon™, Opticon™2, Chromo4™, MiniOpticon™, CFX96™, CFX384™	Bio-Rad®
Yes	Yes	Smartcycler®	Cepheid®
Yes	Yes	Mastercycler® ep realplex, Mastercycler® realplex 2S	Eppendorf
Yes	Yes	Eco™	illumina®
Yes	Yes	Rotor-Gene™ 3000, 6000, Q	Qiagen/Corbett
Yes	Yes	Lightcycler®480, Lightcycler®Nano	Roche Applied Science
No	Yes	MX 4000P®, MX 3000P®, MX 3005P®	Stratagene (Agilent)
Yes	Yes	Quantica®	Techne
Yes	Yes	MIC	Bio Molecular Systems (BMS)

## Important considerations

**Primer design:** For efficient amplification under fast cycling conditions we recommend amplicon lengths between 80bp and 200bp. With all manufacturers master mixes the shorter the amplicon length the faster the reaction can be cycled. Amplicon lengths should not exceed 400bp. Primers should have a predicted melting temperature of around 60°C, using default Primer 3 settings (<http://frodo.wi.mit.edu/primer3/>).

## Reaction setup

1. Before starting, briefly vortex 2x Tamix SyGreen Mix.
2. Prepare a master mix based on following table:

Notes	Final concentration	20µl reaction	Reagent
	1x	10µl	2x Tamix SyGreen Mix
See above for optimal primer design	400nM	0.8µl	Forward primer (10µM)
	400nM	0.8µl	Reverse primer (10µM)
See above for template considerations	variable	<100ng cDNA, <1µg genomic	Template DNA
		Up to 20µl final volume	PCR grade dH <sub>2</sub> O

3. Program the instrument using following conditions, acquiring data on the SYBR® Green or FAM channel:

Notes	Time	Temperature	Cycles
Polymerase activation, 2 minutes for cDNA and 3 minutes for genomic	2min	95°C	1
Denaturation	5 seconds	95°C	40
Anneal/Extension, do not exceed 30 seconds, do not use temperatures below 60°C	20-30 seconds	60°C to 65°C	
Optional melt profile analysis	Refer to instrument instructions		Melt analysis