

## 1.1X Thermo-Start™ ReddyMix™ PCR Master Mix

**Description:** Thermo-Start™ *Taq* DNA Polymerase is a chemically modified version of ThermoPrime *Taq* DNA Polymerase. It is completely inactive at room temperature, preventing the formation and subsequent amplification of non-specific products. The enzyme requires an **activation step at 95°C for 15 minutes**.

**ReddyMix™** PCR Master Mix is a ready-to-use master mix. It is a convenient way of amplifying DNA fragments without the need to thaw individual components, reducing the risk of contamination and pipetting errors. The Thermo-Start™ *Taq* DNA Polymerase, dNTPs, reaction buffer and magnesium chloride are all present in the mix. **ReddyMix™** Master Mix also contains a dye and precipitant to facilitate gel loading.

**Enzyme Source:** *Thermus aquaticus*

**Associated Activities:** Thermo-Start™ has 5' to 3' polymerization and exonuclease activity but lacks 3' to 5' exonuclease activity (proofreading).

**Kit Contents**

Vial (cap color)	Pack Size	
	A	B
1.1X Thermo-Start <b>ReddyMix</b> Master Mix (purple)	2 x 1.8ml	20 x 1.8ml

**Master Mix:** Each vial contains 1.8ml of a 1.1X working concentration PCR Master Mix sufficient for 80 x 25µl reactions. The final reaction 1X contains:

0.625 units	Thermo-Start™ <i>Taq</i> DNA Polymerase
1X	Thermo-Start Reaction Buffer
1.5mM	MgCl <sub>2</sub>
0.2mM	each of dATP, dCTP, dGTP and dTTP
Precipitant and red dye for electrophoresis	

**Storage Conditions:** Store **ReddyMix** at -20°C until ready for use for up to 1 year. Avoid freeze thawing. Vials can be stored at 4°C for up to 1 month. Shipped on ice within the UK and on dry ice internationally and within the US.

**For Research Purposes Only**

1

**Example of Protocol:**

Mix gently and spin down the master mix prior to use

	Volume	Final Concentration 1X
ReddyMix PCR Master Mix	22.5µl	1X
Primer forward (12.5µM each)	1µl*	0.5µM*
Primer reverse (12.5µM each)	1µl*	0.5µM*
Water (PCR Grade)	Variable	
DNA Template	0.5µl	0.5 - 125ng
Total volume	25µl	

\*Scale up or down the volume and concentration as appropriate

**Tip:**

The gel precipitant in ReddyMix™ Master Mix causes a slight increase in the thermal mass of the reaction mix. In a small number of cases this may necessitate some minor re-optimization of the thermal cycler program. If this is the case we suggest increasing the temperature of the denaturation step by 1–2°C and decreasing the temperature of the annealing step by 1–2°C. Alternatively, increase the duration of each step by 5-10 seconds.

**Example of Program:**

	Temp.	Time	Number of cycle
<b>Initial Denaturation</b>	<b>95°C</b>	<b>15 min</b>	<b>1 cycle</b>
Denaturation	95°C	25 sec	30 to 40 cycles
Annealing	48-63°C	35 sec	
Extension**	72°C	65 sec	
Final Extension	72°C	5 min	1 cycle

\*\*Increase length of time in proportion to size of amplicon, *Taq* DNA Polymerase extends at approximately 1000 bp/min.

**Ordering Information:**

AB-1960/A	1.1X Thermo-Start™ ReddyMix™ PCR Master Mix	160 x 25µl rxns
AB-1960/B	1.1X Thermo-Start™ ReddyMix™ PCR Master Mix	1600 x 25µl rxns

**Troubleshooting**

For troubleshooting, see [www.abgene.com/troubleshoot.asp](http://www.abgene.com/troubleshoot.asp) or contact Thermo Fisher Scientific (ABgene) TechSupport at [abgene.techsupport@thermofisher.com](mailto:abgene.techsupport@thermofisher.com)

UK TechSupport, call +44 (0) 1372 840 410

**For all other regions, please contact your local Thermo Fisher Scientific (ABgene) office / distributor.**

Use of this product is covered by one or more of the following US patents and corresponding patent claims outside the US: 5,079,352, 5,789,224, 5,618,711, 6,127,155 and claims outside the US corresponding to US Patent No. 4,889,818. The purchase of this product includes a limited, non-transferable immunity from suit under the foregoing patent claims for using only this amount of product for the purchaser's own internal research. No right under any other patent claim (such as the patented 5' Nuclease Process claims in US Patents Nos. 5,210,015 and 5,487,972), no right to perform any patented method, and no right to perform commercial services of any kind, including without limitation reporting the results of purchaser's activities for a fee or other commercial consideration, is conveyed expressly, by implication, or by estoppel. This product is for research use only. Diagnostic uses under Roche patents require a separate license from Roche. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

**For Research Purposes Only**

2