

## 2X 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
2X Thermo-Start ReddyMix Master Mix (purple)	2 x 1ml	20 x 1ml

**Master Mix:** Each vial contains 1ml of a 2X 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.

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**Example of Protocol:**

Mix gently and spin down the master mix prior to use

	Volume	Final Concentration 1X
ReddyMix PCR Master Mix	12.5µl	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-1961/A	2X Thermo-Start™ ReddyMix™ PCR Master Mix	160 x 25µl rxns
AB-1961/B	2X 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) Tech Support at [abgene.techsupport@thermofisher.com](mailto:abgene.techsupport@thermofisher.com)

UK Tech Support, call +44 (0) 1372 840 410

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

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