

**Thermo Scientific 2X PCR Master Mix  
w/ 1.5 mM MgCl<sub>2</sub>**

**Description:** The 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 ThermoPrime *Taq* DNA Polymerase, dNTPs, reaction buffer and magnesium chloride are all present in the mix.

**Enzyme Source:** *Thermus aquaticus*

**Associated Activities:** ThermoPrime has 5' to 3' polymerization and exonuclease activity but lacks 3' to 5' exonuclease activity (proofreading).

Vial	Pack Size (cap color)	
	A	B
PCR Master Mix	2 x 1 ml (red)	20 x 1 ml (red)

**Master Mix:** Each vial contains 1.0 ml of a 2X working concentration PCR Master Mix sufficient for 80 x 25 µl reactions. The final reaction 1X contains:

0.625 units	ThermoPrime <i>Taq</i> DNA Polymerase
75mM	Tris-HCl (pH 8.8 at 25°C)
20mM	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>
1.5mM	MgCl <sub>2</sub>
0.01% (v/v)	Tween <sup>®</sup> 20
0.2mM	each of dATP, dCTP, dGTP and dTTP

**Storage Conditions:** Store the master mix at -20°C until ready for use for up to 1 year. Avoid freeze thawing. The vial 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.

**Example of Protocol:** Mix gently and spin down the master mix prior to use

	Volume	Final Concentration 1X
PCR Master Mix	12.5 µl	1X
Primer forward (10µM each)	1.25 µl*	0.5 µM*
Primer reverse (10µM each)	1.25 µl*	0.5 µM*
Water (PCR Grade)	Variable	
DNA Template	0.5 – 10 µl	0.5 – 125 ng
Total volume	25 µl	

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

**Example of program:**

	Temp.	Time	Number of cycle
Initial Denaturation	94°C	2 min	1 cycle
Denaturation	94°C	20 sec	30 to 40 cycles
Annealing	50-65°C	30 sec	
Extension**	72°C	60 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-0575/DC/A	PCR Master Mix	160 x 25µl rxns
AB-0575/DC/B	PCR Master Mix	1,600 x 25µl rxns

### Troubleshooting

For technical information or troubleshooting contact Thermo Scientific Genomics Tech Support:

	United States	Rest of World
<b>Email</b>	<a href="mailto:abgeneus.techservice@thermofisher.com">abgeneus.techservice@thermofisher.com</a>	<a href="mailto:abgene.techsupport@thermofisher.com">abgene.techsupport@thermofisher.com</a>
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