

## Taq DNA Polymerase

**Description:** An ultrapure recombinant thermostable DNA polymerase obtained by high level expression of the *Taq* DNA polymerase gene in *E. coli*. It is licensed and optimized for use in the Polymerase Chain Reaction (PCR) process.

**Ordering Information:** AB-0192/A *Taq* DNA Polymerase 250 units  
 AB-0192/B *Taq* DNA Polymerase 2,500 units  
 Both sizes are supplied with 10X Reaction Buffer and 25mM MgCl<sub>2</sub>.

**Enzyme Source:** *Thermus aquaticus*

**Concentration:** 5 units/μl

**Unit Definition:** One unit of enzyme is defined as the amount that will incorporate 10nmoles of dNTPs into acid insoluble material in 30 minutes at 74°C under the analysis conditions below.

**Analysis Conditions:** 25mM TAPS  
 [tris-(hydroxymethyl)-methyl-amino-propane sulfonic acid, sodium salt], pH 9.3 (at 25°C)  
 50mM KCl  
 2mM MgCl<sub>2</sub>  
 1mM β-mercaptoethanol  
 250μM of each: dCTP, dGTP, dTTP  
 250μM [<sup>3</sup>H] dATP (0.05 Ci/mmol)  
 1.25μg/μl activated salmon sperm DNA  
 Add water to a total volume of 50μl. Incubate at 74°C for 10 minutes.

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<b>Storage and Dilution Buffer:</b>	100mM	KCl
	20mM	Tris-HCl, pH 8.0 (at 25°C)
	0.1mM	EDTA (ethylenediaminetetraacetic acid)
	1mM	DTT (dithiothreitol)
	0.5%	Tween® 20
	0.5%	Nonidet® P40
	50% (v/v)	Glycerol

**MgCl<sub>2</sub>** | **Prior to use, defrost thoroughly and invert vial several times to ensure an even concentration of solution is obtained.**

<b>Reaction Buffer (10X):</b>	750mM	Tris-HCl, pH 8.8 (at 25°C)
	200mM	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>
	0.1% (v/v)	Tween® 20

**Storage Conditions:** Store *Taq* DNA polymerase below 0°C, preferably at -20°C, in a constant temperature freezer. Shipped on ice within the UK and on dry ice for international and within the US.

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

**Protocol:** Basic protocols for PCR are detailed in the back of the ABgene® catalogue or at [www.abgene.com](http://www.abgene.com).

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