

DATA SHEET

Version: 2 Revision date: 22/03/23 Canvax Reagents, S.L.U. Luis de Mercado Street, 19 Boecillo Technological Park 47151, Boecillo Valladolid, Spain.

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#### 1. Identification

Product name Horse-Power™ Taq DNA Polymerase with

TruePure™ dNTPs

500 U (5 U/µl) + ultrapure dNTPs 2 mM each

Cat. No Poo26

### 2. Description

Horse-Power Taq DNA polymerase is a thermostable recombinant enzyme produced in an E. coli strain that carries the cloned pol gene from Thermus aquaticus. The enzyme has  $5'\rightarrow 3'$  polymerase activity and a weak  $5'\rightarrow 3'$  exonuclease activity but no  $3'\rightarrow 5'$  exonuclease activity (proofreading).

## 3. Composition

Item	Quantity	
Horse-Power Taq DNA polymerase (5U/μL)	100 μL	
10X PCR Buffer	1.5 mL	
25mM MgCl2 Solution	1.5 mL	
TruePure™ Ultrapure dNTPs 8 mM (2 mM each)	1 mL	

#### 4. Features

#### Molecular Weight: 94 kDa.

- Thermostable (half-life at 94 °C is 40 minutes).
- Adds extra nucleotides (preferentially adenine) without template at 3 ends leaving 3 overhangs PCR fragments. This fact allows the popular TA-cloning or GC cloning.
- Incorporates modified nucleotides (biotinylated, fluorescently labelled, etc).

## Quality:

- Functionally tested in PCR.
- Undetected bacterial DNA (by PCR).
- Undetectable nucleases activity (endo-, exo- and ribonucleases).

#### 5. Storage specifications

Store at -20° C

# 6. Applications

- > Routine amplifications.
- Colony screening (see Red-Taq DNA polymerase).
- Amplifications up to 5 kb using plasmid, viral or genomic DNA as template.
- ➤ PCR fragments amplification for TA or GC cloning. (Preferably use a proofreading polymerase for cloning purposes combined with an efficient blunt cloning vector) (see pSpark® DNA Cloning System)

## 7. Assay conditions

25 mM Tris-HCl pH 9.0 at 25 °C, 50 mM KCl, 2 mg MgCl2, 0.1 mg/mL gelatine, 200  $\mu$ M dATP, dGTP, dTTP, 100  $\mu$ M [ $\alpha$ 32-P] dCTP (0.05  $\mu$ Ci/nmol) and 12.5  $\mu$ g activated salmon sperm DNA.





Autoclaved distilled water

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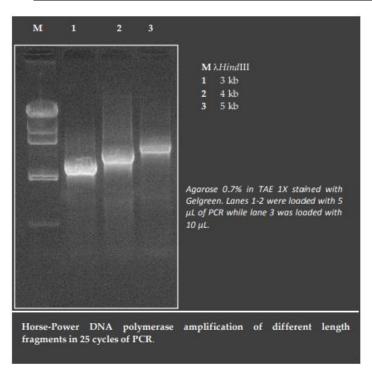
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RECOMMENDED PCR ASSAY (20µL assay)			
Components	Volume	Final con.	
10X PCR buffer	2 µL	1X	
MgCl2 25mM	2 µL	2.5 mM	
dNTPs 8mM mix	2 µL	0.8 mM	
Primer Forward (15mM)	1 µL	0.75 µm	
Primer Reverse (15mM)	1 µL	0.75 µm	
Template DNA	0.2-10 μL	1.75-2.50 ng/μL	
Horse-Power Taq DNA polymerase (5 U/µl)	0.2 μL	0.05 U/μL	

to 20 µL



# **Cycling instructions:**

- > 94 °C 5:00, 25-30x (95 °C 0:30, Tm 0:30, 72°C 1'/kb)
- > 72 °C 10:00
- **>**4 °C ∞

## 8. Further information

Product Use Limitation This product is developed, designed and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

**Disclaimer** 

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