

## Taq DNA Polymerase Recombinant Protein | polA recombinant protein

Recombinant Taq DNA Polymerase

CATALOG #  
**AAA38270**

HOST  
**Recombinant E Coli contains Thermus aquaticus polymerase gene**

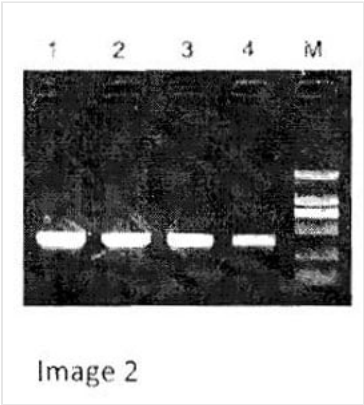
### PRODUCT SYNONYMS

Taq DNA Polymerase; Recombinant Taq DNA Polymerase; TaqDNA; Taq DNA Polymerase Recombinant; DNA polymerase I thermostable; EC 2.7.7.7; Taq polymerase 1; polA recombinant protein

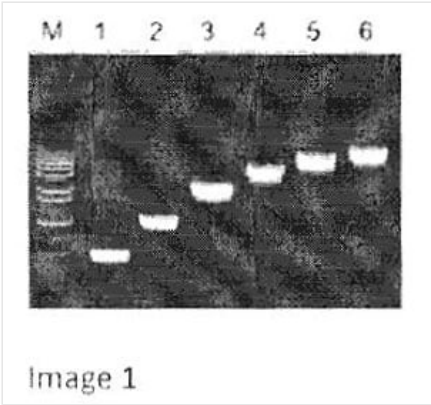
### PRODUCT SPECIFICATIONS

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                          | Recombinant E Coli contains Thermus aquaticus polymerase gene                                                                                                                                                                                                                                                                                                                                                |
| Purity/Purification                           | Greater than 95.0% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                 |
| Form/Format                                   | Tag DNA Polymerase solution (10,000 IU/ 500 uL) in 20 mM Tris-HCl, pH 8.0, 100 mM KCl 0.1 mM EDTA, 1 mM DTT, 50% Glycerol, 0.5% NP40, 0.5% Tween 20.                                                                                                                                                                                                                                                         |
| Unit Definition                               | One unit is defined as the amount of enzyme required to catalyze the incorporation of 10nmol of dNTP into acid-insoluble material in 30 minutes at 74°C. The reaction conditions are: 50mM Tris-HCl (pH 9.0 at 25°C), 50mM NaCl, 5mM MgCl <sub>2</sub> , 200um each of dATP, dCTP, dGTP, dTTP (a mix of unlabeled and [3H]dTTP), 10 ug activated calf thymus DNA and 0.1mg/ml BSA in a final volume of 50ul. |
| 10X Reaction Buffer with MgCl <sub>2</sub>    | 500mM KCl, 100mM Tris-HCl (pH 9.0 at 25C), 1% Triton X-100 and 15mM MgCl <sub>2</sub> . Buffer is optimized for use with 0.2mM of each dNTP.                                                                                                                                                                                                                                                                 |
| 10X Reaction Buffer without MgCl <sub>2</sub> | 500mM KCl, 100mM Tris-HCl (pH 9.0 at 25C) and 1% Triton X-100. Include: 10X Reaction Buffer without MgCl <sub>2</sub> and separate 25mM MgCl <sub>2</sub> Solution.                                                                                                                                                                                                                                          |
| Features                                      | Depend on an Enzyme That Works: Compositions of the storage buffers have been optimized to assure quality performance of the enzyme under a variety of conditions.                                                                                                                                                                                                                                           |
| Specify Your Own Reaction Conditions          | Choose either Taq with Mg-free 10X Reaction Buffer and separate 25mM MgCl <sub>2</sub> or Taq with 10X Reaction Buffer containing 15mM MgCl <sub>2</sub>                                                                                                                                                                                                                                                     |
| Rely on a Performance-Tested Enzyme           | Our PCR systems, enzymes and reagents are proven in PCR to ensure reliable, high-performance results. If you are not completely satisfied with any of our PCR product, we will send a replacement or refund your account.                                                                                                                                                                                    |
| Storage Buffer                                | Compatibility with Reaction Buffers: Taq DNA Polymerase in Storage Buffer. Use of other reaction buffers that do not contain Triton X-100 (final concentration of 0.1%) will result in inactivation of the enzyme.<br><br>50mM Tris-HCl (pH 8.0), 100mM NaCl, 0.1mM EDTA, 1mM DTT, 50% glycerol and 1% Triton X-100.                                                                                         |
| Preparation and Storage                       | Stable for 5 days at 10°C, for longer period of time store at -20°C.                                                                                                                                                                                                                                                                                                                                         |

IMAGES



**Application Data**  
PCR -amplification of a 0.38 kb fragment of human genomic DNA with various amounts of templates (0.05-50 ng) in a 50 ul reaction volume.Lane 1 : 50 ng template ; Lane 2: 5 ng template; Lane 3: 0.5 ng templateLane 4: 0.05 ng template; Lane M: DNA Ladder 2000.



**Application Data**  
PCR- amplification of the DNA templates (5ng)with varying lengths from 0.5 to 6.0 kb in a 50 uL reaction volume.Lane M: 1 kb DNA ladder MarkerLane 1: 0.5 kb; lane 2: 1 kb, lane 3: 2 kb;Lane 4: 3 kb; lane 5: 4kb; Lane 6: 6 kb.

ADDITIONAL INFORMATION

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for polA recombinant protein | <b>Description:</b> Taq DNA Polymerase(a) is a thermostable enzyme of approximately 95 kDa isolated from Thermus aquaticus. This unmodified enzyme replicates DNA at 74°C and exhibits a half-life of 40 minutes at 95°C. The enzyme catalyzes the polymerization of nucleotides into duplex DNA in the 5´~3´ direction in the presence of magnesium and also possesses a 5´~3´ exonuclease activity. Taq DNA Polymerase is recommended for use in PCR but is not recommended for use in DNA sequencing reactions. |
| Product Categories/Family for polA recombinant protein   | Enzymes; DNA Polymerase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

NCBI AND UNIPROT INFORMATION

|                            |                                |
|----------------------------|--------------------------------|
| NCBI GI #                  | 118828                         |
| UniProt Accession #        | P19821                         |
| NCBI Official Full Name    | DNA polymerase I, thermostable |
| UniProt Protein Name       | DNA polymerase I, thermostable |
| UniProt Gene Name          | polA                           |
| UniProt Synonym Gene Names | pol1                           |
| UniProt Entry Name         | DPO1_THEAQ                     |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.