

Specialty Enzymes

Specialty Enzyme Product Listing

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R1028	Restorase DNA Polymerase	7
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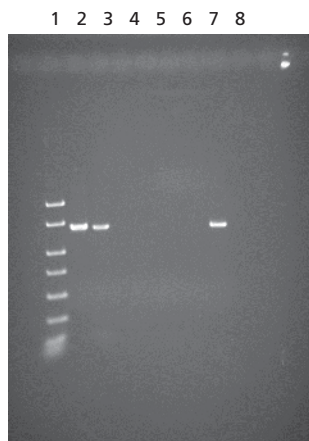
Restorase® DNA Polymerase

Restorase DNA Polymerase with 10× Reaction Buffer combines Sigma's long and accurate enzyme technology with a DNA repair enzyme. The resulting enzyme blend facilitates repair and extends amplification of damaged DNA. DNA templates can be compromised when damaged by exposure to acid, alkylating agents, heat or light. These damages block the amplification of DNA, thereby affecting PCR efficiency. Restorase modifies the damaged sites and allows for amplification of samples that would otherwise prove useless for PCR-based methods.

Features and Benefits

- Repair damaged DNA
- Restore amplification
- Recover archived DNA

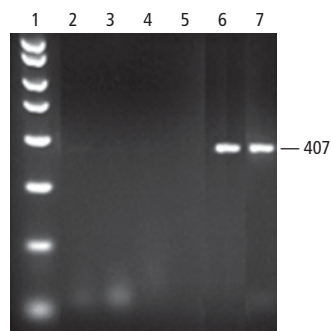
Amplification of Blood Card Extracted DNA



Amplification of blood card extracted DNA. 1.3 kb DNA extracted from a Blood Card was amplified using Restorase and other high fidelity enzymes on a 1% agarose gel, 7 ml per lane.

- Lane 1: PCR Marker ([P9577](#))
- Lane 2: Restorase DNA Polymerase
- Lane 3: Standard Taq
- Lane 4: Competitor S, enzyme H
- Lane 5: Competitor R, enzyme E
- Lane 6: Competitor QB, enzyme A, sample 1
- Lane 7: Competitor QB, enzyme A, sample 2
- Lane 8: Competitor I, enzyme PHF

Reliable Amplification of Rescued 30-Year-Old Archived Moth DNA



Reliable amplification of rescued 30-year-old archived moth DNA. Amplification of 407 bp of cytochrome oxidase was restored from 30-year-old moth legs using Restorase and other commercially available thermostable polymerases.

- Lane 1: PCR Marker
- Lane 2: Competitor N
- Lane 3: Competitor S
- Lane 4: Taq
- Lane 5: AccutaqLA
- Lane 6: Restorase
- Lane 7: Positive control

Components: Restorase DNA Polymerase
10× Restorase Buffer

Storage: -20 °C
Shipped in wet ice

Ordering Information

Cat. No.	Product Description	Quantity
R1028	Restorase DNA Polymerase	50 reactions

Specialty Enzymes

MTP™ Taq DNA Polymerase

MTP Taq DNA Polymerase is a recombinant thermostable enzyme from *Thermus aquaticus* expressed in *E. coli* and purified using a proprietary process to minimize levels of contaminating DNA. The enzyme has 5'→3' DNA polymerase and exonuclease activities, is approximately 95 kD by SDS-PAGE, and has no detectable endonuclease or 3'→5' exonuclease activities.

Contaminating DNA present in most other polymerase preparations often preclude or obscure the accurate interpretation of results, especially when targeting conserved sequences (e.g. bacterial 16S rRNA region).¹ Although MTP Taq ensures a high-quality, low contaminant DNA polymerase for reliable PCR amplification, DNA contaminants can be introduced into PCR through a number of other reagents.² To further minimize the risk of contaminant DNA during PCR, we include 10× MTP Taq Buffer (Catalog Number [M9943](#)) with each tube of MTP Taq DNA Polymerase. Each lot of MTP Taq and 10× MTP Taq Buffer undergoes strict quality control testing to ensure the absence of contaminating DNA. To prevent false-positive PCR results, only DNA-free reagents should be used in PCR reactions with MTP Taq DNA Polymerase.

Features and Benefits

- Proprietary purification process to ensure lowest levels of contaminating DNA
- Specialized 10× Buffer included to minimize addition of contaminating DNA
- Strict quality control testing procedures used to ensure absence of detectable levels of contaminating DNA

Components: MTP Taq DNA Polymerase
10× MTP Taq Buffer

Unit definition: One unit incorporates 10 nmol of total deoxyribonucleoside triphosphates into acid precipitable DNA in 30 minutes at 74 °C

Storage: -20 °C
Shipped in wet ice

Ordering Information

Cat. No.	Product Description	Quantity
D7442	MTP Taq DNA Polymerase	250 units