**Thermococcus species** 9°N-7. The archaea was isolated from a submarine thermal vent, at a depth of 2,500 meters, 9° north of the equator at the East Pacific Rise (3).

Supplied in: 100 mM KCl, 0.1 mM EDTA, 10 mM Tris-HCl (pH 7.4), 1 mM DTT and 50% glycerol.

**Applications:**
- Primer extension
- SNP Analysis

**Reagents Supplied with Enzyme:**
10X ThermoPol® Reaction Buffer.

**Reaction Conditions:**
1X ThermoPol Reaction Buffer, 200 µM each dNTP, DNA template, primer and 1–2 units 9°Nm DNA Polymerase in a total reaction volume of 100 µl.

**1X ThermoPol Reaction Buffer:**
20 mM Tris-HCl (pH 9.0)
10 mM (NH₄)₂SO₄
20 mM KCl
2 mM MgSO₄
0.1% Triton® X-100
pH 8.8 @ 25°C

**Unit Definition:** One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 75°C.

**Unit Assay Conditions:**
1X ThermoPol Reaction Buffer, 200 µM dNTPs including [3H]-dTTP and 15 nM primed single-stranded M13mp18.

**Heat Inactivation:**
No

**Quality Control Assays**

**Endonuclease Activity:**
Incubation of a 50 µl reaction in ThermoPol Reaction Buffer supplemented with 400 µM each dNTP containing a minimum of 20 units of 9°Nm DNA Polymerase with 1 µg of supercoiled φX174 DNA for 4 hours at either 37°C or 75°C results in < 10% conversion to the nicked form as determined by agarose gel electrophoresis.

**Notes on use:**
It is suggested that the number of units be optimized with each primer:template.

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**References:**

**Companion Products Sold Separately:**
- Magnesium Sulfate (MgSO₄) Solution #B1003S 6.0 ml
- Diluent E #B8005S 4.0 ml
- ThermoPol Reaction Buffer Pack #B9004S 6.0 ml
- ThermoPol II (Mg-free) Reaction Buffer Pack #B9005S 6.0 ml
- ThermoPol DF (Detergent-free) Reaction Buffer Pack #B9013S 6.0 ml
Deoxynucleotide Solution Set
#N0446S 25 µmol each

Deoxynucleotide Solution Mix
#N0447S 8 µmol each
#N0447L 40 µmol each

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