

| Codice | Descrizione | Confezione |
|--------------------|-------------------------|--------------|
| BM AK-02-50 | POLYTAQ HotStart | 100 U |
| BM AK-02-51 | | 500 U |

Product Description

POLYTAQ HOT START is a heat-activated form of a thermostable DNA polymerase, which is inactive at room temperature, and provides improved specificity compared to standard DNA polymerases. POLYTAQ HOT START can eliminate the production of non-specific reaction products, such as primer-dimers and misprimed products. The enzyme must be activated by heat treatment before primer extension is possible. Subsequently, the reaction can be handled according to the user's existing protocols for thermostable DNA polymerases. Such pre-treatment will give excellent specificity, but even higher specificity can be achieved by reducing the time of the pre-incubation. The effect of this will be to cause the amount of enzyme available in the reaction to increase gradually over time. This reduce the likelihood of there being, in the essential early stages of the reaction, an excess of enzyme over template, which is known to cause problems with specificity.

Features

- Extremely high specificity.
- Elimination of non-specific reaction products.
- Can extend through difficult regions of DNA such as secondary structures or repeats.
- Inactive at room temperature.

Applications

- High-throughput experiments, as enzyme is inactive at room temperature.
- High-sensitivity applications.
- High-specificity reactions that are analysed on agarose or polyacrylamide gels.

Unit Definition

One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTPs into acid-insoluble form in 30 minutes at 72° C under the following assay conditions: 25 mM TAPS (tris-[hydroxymethyl]methyl-amino-propanesulphonic acid, sodium salt), pH 9.3 at 25° C, 50 mM KCl, 2mM MgCl₂, 1 mM β-mercaptoethanol, 200 μM of each dATP, dGTP, dTTP, 100 μM dCTP (a mix of unlabelled and γ-[³²P]-labelled) and 12.5 μg activated salmon sperm DNA in a final volume of 50 μl.

Storage Conditions

POLYTAQ HOT START will remain stable at -20° C in a constant-temperature freezer.

Storage Buffer

20 mM Tris-HCl (pH 7.5), 100 mM NaCl, 0.1 mM EDTA, 2 mM DTT, 50% glycerol, 0.1 % Tween-20.

Reaction Buffers

(10x): 160 mM (NH₄)₂SO₄, 670 mM Tris-HCl (pH 8.8 at 25° C), 0.1 % Tween-20.

Separate Magnesium Solutions

50 mM MgCl₂