Biotium
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Product Information

Cheetah™ Hot-Start Taq DNA Polymerase (Cheetah™ Taq) (Low DNA)

Catalog Number: 29050

Packaging Size: 500 units (100 uL at 5 units/uL)

Additional materials supplied with: one vial of 10X Cheetah™ Taq Buffer (without Mg^{2+}) (1.5 mL) and one vial of 25 mM $MgCl_2$ (1.5 mL)

Storage and Handling

Cheetah™ Taq is supplied in a buffer containing Tris-HCl (pH 9.0), DTT, EDTA, KCl and glycerol. The product is shipped on blue ice and should be stored immediately at -20°C upon arrival. The 10X Cheetah™ buffer and $MgCl_2$ solution should be stored at 4 or -20 °C. If stored according to the recommended condition, the enzyme and the accompanying components should be stable for at least one year from the time of arrival.

Product Description

Cheetah™ Hot-Start Taq DNA Polymerase is a chemically modified Taq polymerase designed for reducing nonspecific DNA amplification due to primer-dimer formation in PCR. The activation time for Cheetah™ Taq is only about 2 minutes at 95 °C, which is 5 to 10 times faster than that for AmpliTaq Gold® or HotStar® Taq. Cheetah™ Taq is also superior to antibody-based hot-start Taq polymerases (such as those from Invitrogen, BioRad, Promega, and TakaRa) because it is free of animal DNA and its activity is completely suppressed prior to activation. Furthermore, unlike AmpliTaq Gold®, activation of Cheetah™ Taq is relatively insensitive to pH, permitting use of reaction buffers formulated between pH 6 and pH 10.

. Recommended Protocol:

1 Set up PCR reaction using the following final concentrations of reaction components:
- 1x Cheetah™ buffer
- 1.5-3.5 mM $MgCl_2$
- 0.1-1 uM each of primers
- 0.2 mM each of dNTPs
- 0.02-0.1 unit/uL Cheetah™ Taq

2 Two-temperature cycling protocol:
- 95 °C – 2 minutes
- 25 - 35 cycles of
  - 95 °C – 1-15 seconds
  - 60 °C – 1 minute per Kb

3 Three-temperature cycling protocol:
- 95 °C – 2 minutes
- 25 - 35 cycles of
  - 95 °C – 1-15 seconds
  - 50 °C – 5 -30 seconds
  - 72 °C – 1 minute per Kb