

User Manual

Version 1.1

Product Name: PcrA Helicase

Cat #: PcrAH-100

Description:

PcrA is an ATP-driven 3' to 5' helicase responsible for the unwinding of double-stranded DNA (dsDNA). PcrA binds to and unravels dsDNA into two strands of single-stranded DNA (ssDNA).

Application:

Helicase-dependent DNA isothermal amplification.
For Research Use Only. Not for use in diagnostic procedures.

Source:

A recombinant *E. coli* strain carrying the cloned *Geobacillus stearothermophilus* PcrA gene.

Recommended Storage Conditions: -20°C

Protocol:

Helicase reactions were performed at 65°C for 30 min in a buffer containing 20 mM Tris-HCl (pH 7.5), 100 mM KCl, 3 mM MgCl₂, 3 mM ATP, 5 mM dithiothreitol, 10% glycerol, ~1 ng of the DNA substrates, and 100 ng of the PcrA helicase. The reactions were stopped by the addition of SDS dye, and the products were analyzed by 10% native polyacrylamide gel electrophoresis.

Reference:

Asma Naqvi, Eowyn Tinsley, Saleem A Khan. Purification and Characterization of the PcrA Helicase of *Bacillus anthracis*. *J Bacteriol.* 2003 Nov; 185(22): 6633-6639.