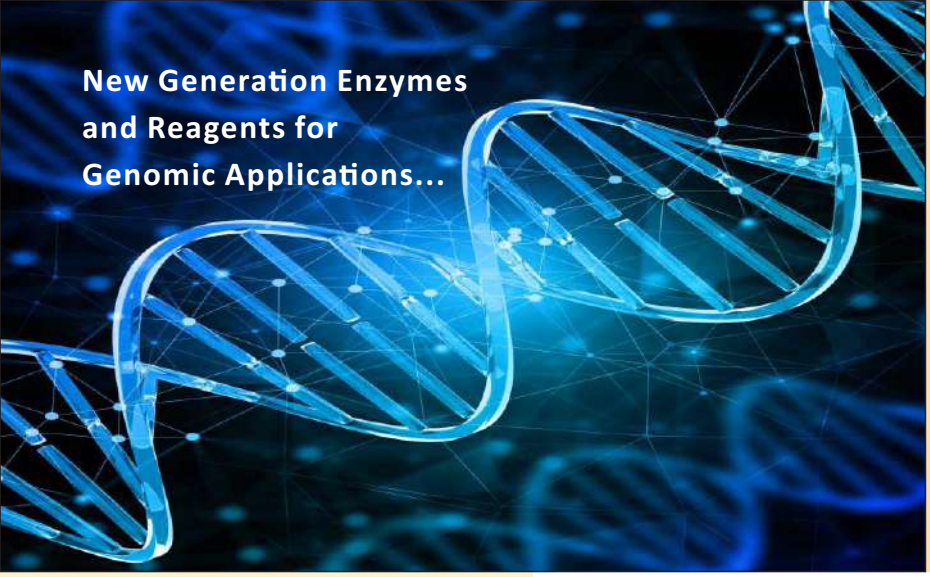



GeNei™
Since 1989

# RoBst™ DNA Polymerase

## Features

- Efficient strand displacement activity.
- Rapid amplification rate compared to conventional PCR.
- Higher processivity, increased salt tolerance and catalytic efficiency.
- Suitable for amplification of low concentration of templates.

## Applications

- Superior amplification and robustness, especially at point-of-care diagnostics.
- DNA sequencing through high GC regions.
- Rapid sequencing from nanogram-level DNA template.
- Applicable for whole genome amplification, multiple displacement amplification, and Next-generation sequencing.

## Quality Control Assays

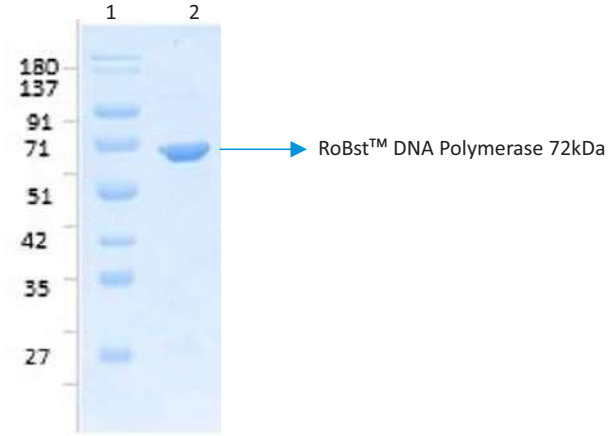
- **Purity:** >95% by SDS-PAGE.
- **Nuclease assays:** No detectable endonuclease, exonuclease, and RNase activity.
- ***E. coli* host contamination:** No *E. coli* DNA contamination was detected in qPCR with specific primers targeting 16S rRNA gene.
- **Functional assay:** RoBst™ DNA polymerase tested extensively for its reproducible performance in LAMP assays.

## Product Description

RoBst™ DNA polymerase I (large fragment) from *Bacillus stearothermophilus* (Bst), is a robust polymerase used for various isothermal amplification reactions. The recombinant enzyme is prepared from an *Escherichia coli* (*E. coli*) strain containing the gene encoding for RoBst™DNA Polymerase. Due to its strand displacement activities, the enzyme is used for the implementation of loop-mediated isothermal amplification (LAMP). The thermostable enzyme detects low sensitivity nucleic acids with higher efficiency and specificity. The enzyme with a molecular weight of 72kDa catalyses 5' to 3' Polymerase activity and lacks 5' to 3' exonuclease activity.

The RoBst™ DNA Polymerase was biochemically characterized in different assays.

## Purity by SDS-PAGE



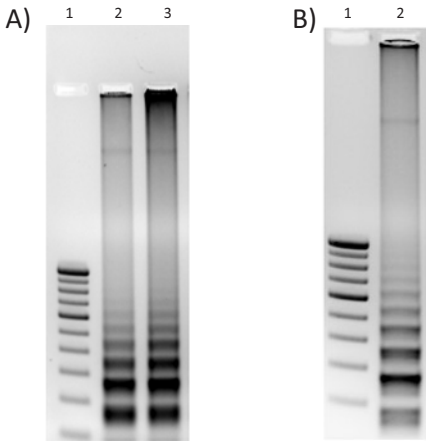

1. Marker, 2. RoBst™ DNA Polymerase 72kDa

Purified RoBst™ DNA Polymerase was run on a 10% SDS-PAGE and stained with Coomassie blue. Bst DNA Polymerase appeared as a single band at 72kDa.

**ISO9001:2015**


**ISO13485:2016**

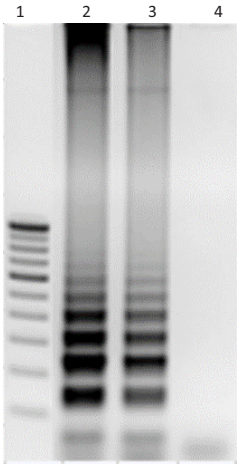

## Enzyme Activity




A) Enzyme activity: 1. 100 bp DNA Ladder, 2. Commercial, 3. RoBst™ DNA Polymerase
B) Enzyme stability: 1. 100 bp DNA Ladder, 2. RoBst™ DNA Polymerase

The DNA strand displacement activity of RoBst™ DNA polymerase was measured using LAMP technique. The assay was performed under isothermal conditions using bacterial gDNA as a template. The reaction conditions such as the concentration of template, primers, buffers, and the amplification method were optimized. The LAMP products were visualized under UV light after agarose gel electrophoresis. The enzyme activity was tested after 12 months of storage, and the enzyme was found to be stable.

## Benchmarking Study




1. 100 bp DNA Ladder, 2. RoBst™ DNA Polymerase, 3. Commercial 1, 4. Commercial 2.

The LAMP assay was performed using bacterial gDNA as a template with the optimized buffer and amplification protocol. The LAMP products were visualized under UV light after agarose gel electrophoresis. The enzyme activity was observed with GeNei RoBst™DNA Polymerase and Commercial 1. No amplification was observed with Commercial 2.

### Ordering Information

| Cat. No. | PI No. | Product Description | Pack Size |
|---|---|---|---|
| 0606000021730 | MME60L | RoBst™ DNA Polymerase (8 U /µl) | 250U |
| 0606000031730 | MME60J | RoBst™ DNA Polymerase (8 U /µl) | 1000U |


## Contact us

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