

JetStart™ Taq DNA Polymerase

Antibody Modified

Features

- ❖ Monoclonal antibody reversibly blocks the polymerase activity.
- ❖ High functional activity compared to commercial.
- ❖ Increased PCR product yield.
- ❖ Amplification of long targets up to 6.4kb genomic DNA.
- ❖ Enhanced specificity and sensitivity.
- ❖ Amplification of low-copy targets.

Applications

- ❖ Suitable for Real-time and end-point PCR.
- ❖ Development of master mix.
- ❖ One step Reverse Transcriptase-PCR.
- ❖ Amplification of templates from different sources: *Escherichia coli* (*E. coli*), Human, Plant and Plasmid DNA.
- ❖ Ideal for routine PCR applications and molecular diagnostics.

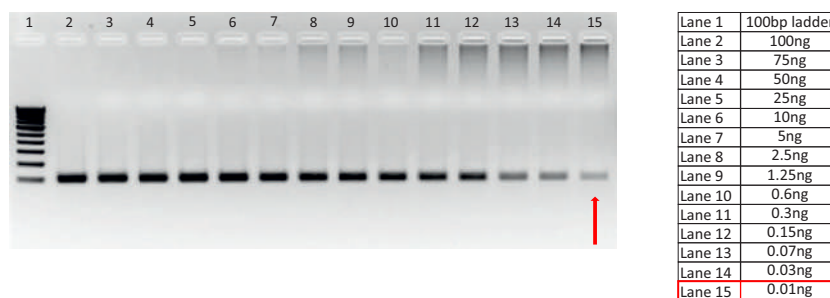
Product Description

JetStart™ Taq DNA Polymerase contains recombinant Taq DNA polymerase bound to a monoclonal antibody that blocks polymerase activity at ambient temperature. The DNA polymerase activity is restored during the initial denaturation step of polymerase chain reaction (PCR) reaction. The enzyme is supplied with a uniquely formulated assay buffer which provides robust amplification of DNA. A combination of antibody modified DNA polymerase with the optimized hot start buffer eliminates the nonspecific amplification of DNA in PCR reactions.

Characterization Studies

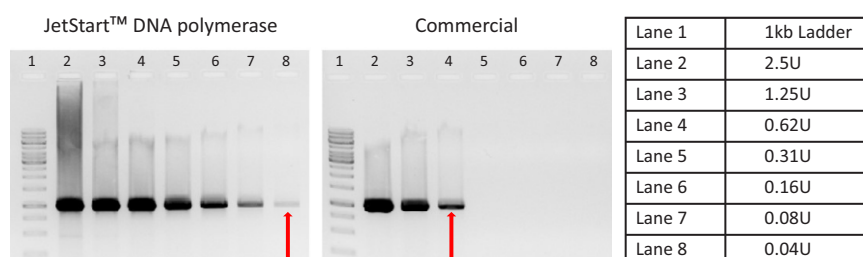
High Sensitivity

JetStart™ Taq DNA polymerase was evaluated for its sensitivity with various concentrations of *E. coli* genomic DNA using the optimized hot start buffer and reaction conditions. The PCR products were visualized under UV light after agarose gel electrophoresis. Amplification up to 0.01ng was observed.



High Functionality

Various concentrations of JetStart™ Taq DNA polymerase and commercial was tested with *E. coli* genomic DNA, hot start buffer and reaction conditions. The PCR products were visualized under UV light after agarose gel electrophoresis. Figures were shown below:



Quality Control Assays

- ❖ **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:** JetStart™ Taq DNA polymerase tested extensively for its reproducible performance in critical PCR amplifications.

ISO9001:2015



ISO13485:2016



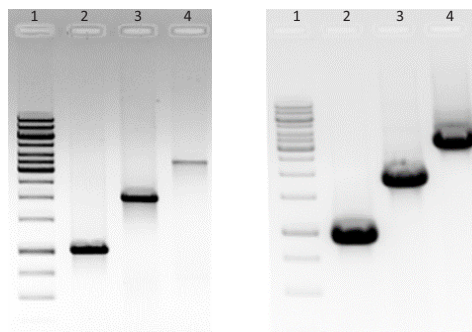
Contact us

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Robust Amplification

JetStart™ Taq DNA polymerase was tested against conventional Taq DNA polymerase for robustness. *E. coli* genomic DNA was used as a template and the amplified products were analyzed under UV light after agarose gel electrophoresis. Higher PCR product yield was observed with JetStart™ DNA polymerase.

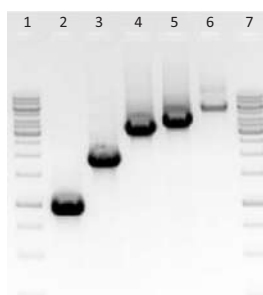


Taq DNA Polymerase JetStart™ Taq DNA polymerase

Lane 1	1kb Ladder
Lane 2	1kb
Lane 3	1.9kb
Lane 4	3.5kb

High Specific Activity

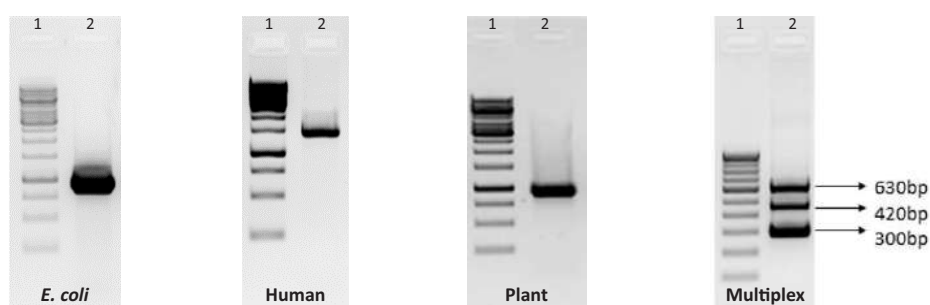
Longer amplicons with consistent and reliable amplification with genomic DNA with high specificity up to 6.4kb.



Lane 1	1kb Ladder
Lane 2	1kb
Lane 3	1.9kb
Lane 4	3.5kb
Lane 5	4.2kb
Lane 6	6.4kb
Lane 7	1kb Ladder

Amplification from different sources

Genomic DNA from various sources were tested with the JetStart™ Taq DNA polymerase and the amplified products were observed in all the samples.



- A - Filament temperature-sensitive mutant Z (1kb).
- B - Tissue-type plasminogen activator (1.4kb).
- C - Chloroplast gene (960bp)
- D - Modified plasmid gene.

Ordering Information

Cat. No.	PI No.	Product Description	Pack Size
0606200021730	MME62L	JetStart™ Taq DNA Polymerase - Ab modified, (Includes Enzyme, Assay buffers: 2 vials, 25mM MgCl ₂ : 1 vial and Magic Solution: 1 vial)	250U
0606200031730	MME62J	JetStart™ Taq DNA Polymerase - Ab modified, (Includes Enzyme, Assay buffers: 2 X 4 vials, 25mM MgCl ₂ : 1 vial and Magic Solution: 1 vial)	1000U