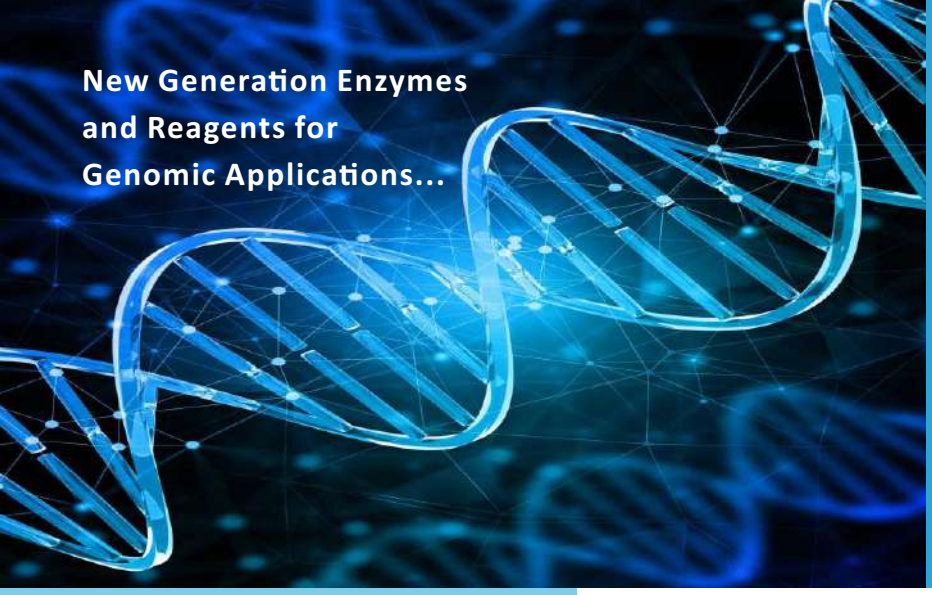


GeNei™
Since 1989

NeoTaq™ DNA Polymerase

Features

- High sensitivity
- Higher functional activity compared to conventional Taq DNA polymerase
- Robust amplification with minimum optimization
- Higher yields of PCR products
- Amplification of long targets up to 6.4 kb from genomic DNA

Applications

- Real-time PCR
- Highly specific amplification of GC rich templates
- End point PCR
- Amplification from different sources of template: *E. coli*, Human, Plant and Plasmid DNA
- Very low copy targets
- Multiplex primer reaction
- High throughout PCR Procedures

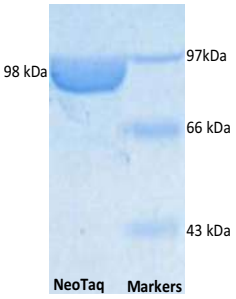
Quality Control

- **Nuclease Activity:** No detectable endonuclease Exonuclease and RNase activity
- ***E. coli* Host DNA Contamination:** No *E. coli* DNA contamination was detected in qPCR with specific primers targeting 16S rRNA gene
- **Functional Assay:** Different concentrations of NeoTaq™ DNA polymerase tested extensively for it's reproducible performance in critical PCR amplifications

NeoTaq™ DNA Polymerase is derived from recombinant expression of a genetically modified form of thermostable DNA polymerase from thermophilic bacterium *Thermus aquaticus* expressed in *E. coli.* The 98kDa enzyme catalyzes 5' to 3' polymerase activity and lacks 3' to 5' exonuclease (proof reading) activity but has an inherent 5' to 3' exonuclease activity. The enzyme has been genetically modified to offer high sensitivity and amplification efficiency as compared to standard Taq DNA polymerases. NeoTaq™ DNA Polymerase is ideal for standard PCR templates up to 6.4 kb.

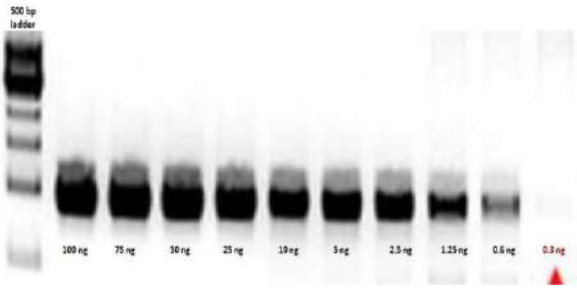
The NeoTaq™ DNA Polymerase was characterized in different assays:

Purity by SDS - PAGE



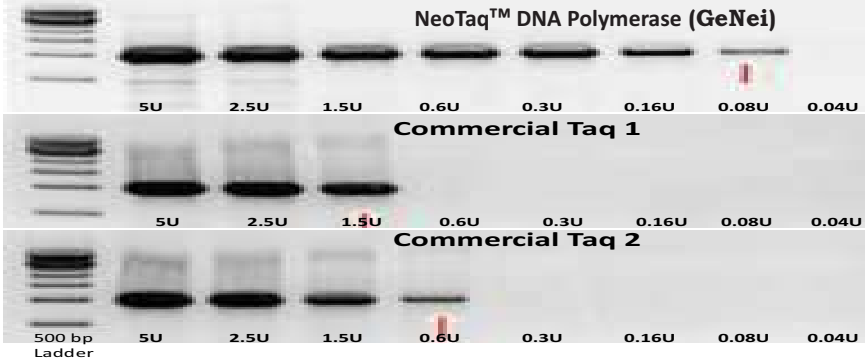
Purified NeoTaq™ was run on a 10% SDS-PAGE and stained with Coomassie blue. NeoTaq™ appeared as a single band at 98 kDa

Sensitivity



Bacterial genomic DNA was used as template for 1kb gene amplification. Different concentration of template was prepared from a 100ng stock and amplified using the optimized buffer and the amplification protocol and visualized by gel electrophoresis. NeoTaq™ DNA Polymerase amplified template at a concentration as low as 0.3 ng.

Functionality

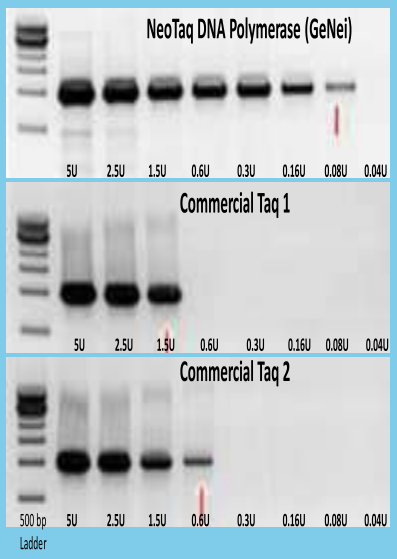


Different concentrations of NeoTaq™ was prepared from a 5U/µL stock. Bacterial genomic DNA was used as template and the 1kb gene was amplified using the optimized buffer and the amplification protocol. The bands were visualized by gel electrophoresis. Functional activity of NeoTaq™ Polymerase was observed at a concentration of 0.08U, which was significantly lower than the commercial products.

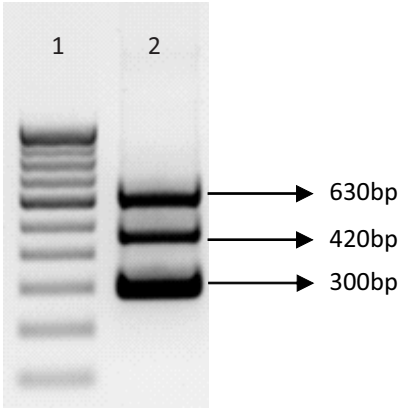
GeNei™

ISO9001:2015

ISO13485:2016

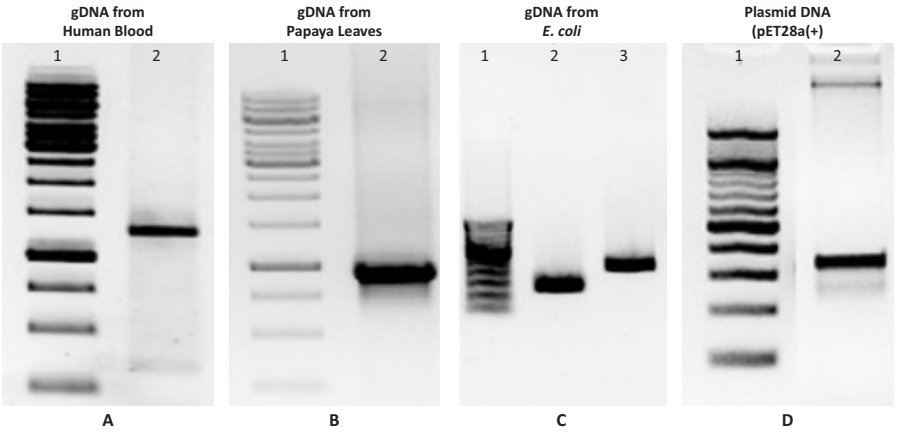


Multiplex PCR



Three sets of primers were designed to amplify the three gene targets in a modified plasmid. Multiplex PCR was performed using NeoTaq™ DNA Polymerase for amplification. The multiplex PCR products were visualized by UV lights after agorose gel Electrophoresis (Lane2). All three target genes of 630,420 and 300bp amplified efficiently.

Amplification of targets from different sources



A. Tissue plasminogen activator (1.5 kb TPF1-TPR1)
B. 960 bp of targeted chloroplast gene
C. Filamenting temperature sensitive mutant Z ((273 bp (FTsZ) 444 bp (FTsZ))
D. 350 bp (T7 promoter)

Primers were designed for specific gene targets for the above-mentioned sources. Genomic DNA was isolated from respective sources and the target genes were amplified by optimized amplification protocol using NeoTaq™ DNA Polymerase. Specific genes efficiently amplified from all the four sources.

Ordering Information

Catalogue No.	PI No.	Product Description	Pack Size
0605600021730	MME56L	NeoTaq™ DNA Polymerase (1 U/µl), (Includes Enzyme, Assay buffers: 2 vials, 25mM MgCl2: 1 vial and Magic Solution: 1 vial)	250U
0605600031730	MME56J	NeoTaq™ DNA Polymerase (1 U/µl), (Includes Enzyme, Assay buffers: 2 X 4 vials, 25mM MgCl2: 1 vial and Magic Solution: 1 vial)	1000U
0605600041730	MME56B	NeoTaq™ DNA Polymerase (1 U/µl), (Includes Enzyme, 2 Assay buffers: 2 X 7 bottles, 25mM MgCl2: 1 bottle and Magic Solution: 1 bottle)	5000U
0605700021730	MME57L	NeoTaq™ DNA Polymerase (3 U/µl), (Includes Enzyme, Assay buffers: 2 vials, 25mM MgCl2: 1 vial and Magic Solution: 1 vial)	250U
0605700031730	MME57J	NeoTaq™ DNA Polymerase (3 U/µl), (Includes Enzyme, Assay buffers: 2 X 4 vials, 25mM MgCl2: 1 vial and Magic Solution: 1 vial)	1000U
0605700041730	MME57B	NeoTaq™ DNA Polymerase (3 U/µl), (Includes Enzyme, 2 Assay buffers: 2 X 7 bottles, 25mM MgCl2: 1 bottle and Magic Solution: 1 bottle)	5000U
0605800021730	MME58L	NeoTaq™ DNA Polymerase (5 U/µl), (Includes Enzyme, Assay buffers: 2 vials, 25mM MgCl2: 1 vial and Magic Solution: 1 vial)	250U
0605800031730	MME58J	NeoTaq™ DNA Polymerase (5 U/µl), (Includes Enzyme, Assay buffers: 2 X 4 vials, 25mM MgCl2: 1 vial and Magic Solution: 1 vial)	1000U
0605800041730	MME58B	NeoTaq™ DNA Polymerase (5 U/µl); (Includes Enzyme, 2 Assay buffers: 2 X 7 bottles, 25mM MgCl2: 1 bottle and Magic Solution: 1 bottle) 5000Units	5000U

Contact us

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