StranDisplace™ II Thermostable DNA Polymerase, 8 U/µl

LOT: See product label

EXPIRY DATE: See product label

ORDERING INFORMATION

CAT. NO.	SIZE	PACKAGE CONTENT
BR1101301	8000 U (1000 rxn)	1 ml StranDisplace II Thermostable DNA Polymerase 2 × 1.5 ml 10× SD II Reaction Buffer

COMPONENT	COMPOSITION
StranDisplace II Thermostable DNA Polymerase	StranDisplace II Thermostable DNA Polymerase, 8 U/µl, in storage buffer containing 50% (v/v) glycerol.
10× SD II Reaction Buffer	Optimized 10× SD II reaction buffer.
STORAGE	-20°C (until expiry date – see product label)

FEATURES

- Exceptionally pure thermostable DNA polymerase
- Strong strand-displacement activity
- High salt and non-ionic detergent tolerance
- Deficient in 5'→3' and 3'→5' exonuclease activity

APPLICATIONS

- Isothermal nucleic acid amplification/detection
- Very rapid and sensitive detection via LAMP assays
- Sequencing

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DESCRIPTION

biotechrabbit™ StranDisplace II Thermostable DNA Polymerase is an exceptionally pure enzyme for isothermal nucleic acid amplification/detection applications in which strong strand-displacement activity at elevated temperatures is required. The polymerase is especially well suited for very rapid and sensitive detection via LAMP assays.

StranDisplace II Thermostable DNA Polymerase is a thermophilic DNA polymerase with strong strand-displacement activity and deficiency in both, 3' → 5' and 5'→ 3' nuclease activities. The enzyme tolerates elevated salt concentrations up to 125 mM KCl, and non-ionic detergents detergents up to 5%.

The polymerase is active up to 70°C and can be used for the same applications as Bst DNA Polymerase Large Fragment and Bsm DNA Polymerase.

APPLICATION RECOMMENDATION

- Refer to the public articles for recommendations and protocols.
- Recommended use is 8 units per reaction.
- Recommended temperature for isothermal amplification is 60-65ºC.
- The enzyme is heat inactivated by incubation at 80°C for 10 minutes.
- Use of this enzyme in certain applications may be covered by patents and may require a license.

REFERENCES

Loop-mediated isothermal amplification (LAMP)

- Tsugunori Notomi, et al., 2000, Nucleic Acids Res., v. 28, No. 12, e63.
- Masaki Imai, et al., 2007, Journal of Virological Methods, 141, 173-180, 2007.

Sequencing

- Mead, D.A. et al., 1991, Biotechniques, 11, 76-87.

CERTIFICATE OF ANALYSIS

Unit Definition
One unit is defined as the amount of polymerase required to convert 10 nmol of dNTP into acid insoluble material in 30 minutes at 30°C.

Quality Control

Protein Purity
Protein purity is analyzed by SDS polyacrylamide gel electrophoresis.

Exonuclease Activity
Linearized DNA is incubated with the enzyme in a 50 µl reaction mixture for 4 h at 37°C. No degradation of DNA was observed.

Endonuclease/Nick Activity
Supercoiled plasmid DNA is incubated with the enzyme in a 50 µl reaction mixture for 4 h at 37°C. No conversion of covalently closed circular DNA to nicked DNA was detected.

Contamination with *E. coli* DNA
A sample of denatured enzyme is analyzed with specific primers targeting the 16S rRNA gene in qPCR for the presence of contaminating *E. coli* DNA. No *E. coli* DNA was detectable.

Quality confirmed by: Head of Quality Control

SAFETY INSTRUCTIONS
For safety instructions please see Safety Data Sheets (SDS)/Sicherheitshinweise finden Sie in den SDS unter: http://www.biotechrabbit.com/support/documentation.html.

USEFUL HINTS
- Visit Applications at www.biotechrabbit.com for more products and product selection guides.
- Most biotechrabbit products are available in custom formulations and bulk amounts.

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Certified Quality-System mdc ISO 13485 ISO 9001

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