Varizymes®
OPTIONS AMPLIFIED

Displase™ DNA Polymerase

Psychrophilic DNA polymerase

Contents

Displase™ DNA polymerase is provided at a concentration of 5 U/µL with 10X Isothermal buffer and 5 M betaine.

Background

Displase DNA polymerase is a recombinant, truncated (lacks 5' to 3' exonuclease activity), psychrophilic DNA polymerase that has robust strand-displacement activity between 35-50 °C for isothermal DNA amplification.

Application Notes

Displase DNA polymerase (exonuclease minus) can be used for isothermal DNA amplification, strand-displacement DNA synthesis, and random primer labelling.

**These products are intended for research use only, not for diagnostic use. The safety and efficacy of these products in diagnostic or other clinical uses has not been established.*

Shipping and Storage

Displase DNA polymerase is supplied in a buffer of 50% glycerol, 50 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.05% Tween-20, 0.05% NP-40 substitute, pH 7.5. Includes 1 mL of 10X Isothermal buffer and 5 M betaine.

Displase DNA polymerase is shipped on dry or blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided.

Quality Control

- Displase DNA polymerase Unit activity: A known polymerase is used to create a standard curve with a quantitative primer extension assay against which the activity of this enzyme is measured.
- Purity: >95% as determined by SDS-PAGE analysis
- Displase DNA polymerase is free of detectable RNase and DNase (exo- and endonuclease).
- <0.01 ng contaminating host DNA per 50 U

Suggested Protocol

Component	Stock	Volume	Final Concentration
10X Isothermal Buffer	10x	2.5 µL	1x
dNTP Mix	25 mM	1 µL	1 mM ea.
singled-stranded M13	1 mg/mL	0.2 µL	8 ng/µL
Primer	10 mM	1 µL	0.4 µM
Betaine[1]	5 M	5 µL	1 M
Displase[2] DNA polymerase	5 U/µL	1 µL	0.2 U/µL
Nuclease-Free Water		to 25 µL	

[1] A final concentration of 1 M betaine gives maximum strand-displacements for Displase DNA polymerase, but is not essential for strand-displacement activity.

[2] Titrate Displase DNA polymerase to determine optimal activity for the specific needs of your assay.