Product Information Sheet

SyFi High Fidelity DNA Polymerase

Conc: 2 U/µl Store at –20°C (non-frost-free)

Description

SyFi DNA Polymerase is a high-fidelity thermophilic DNA polymerase from Syzygy Biotech Solutions. The SyFi enzyme contains an integral 3'→5' proofreading exonuclease activity. SyFi is extremely thermostable at temperatures of 95 to 100°C.

Source

SyFi DNA Polymerase is isolated recombinantly from an *E. coli* strain that carries the gene from *Pyrococcus species* GB-D. The native organism was isolated at 2,010 meters and is able to grow at temperatures as high as 104°C (1).

Storage Buffer

10mM Tris-HCl, 100mM KCL, 0.1mM EDTA, 1mM DTT, 50% glycerol, 0.1% Triton X-100 pH 7.4 @ 25°C.

10X SyFi Reaction Buffer

20mM Tris-HCl, 10mM $(NH_4)SO_4$, 10mM KCl, 2mM $MgSO_4$, 2mM $MgSO_4$, 0.1% Triton X-100, pH 8.8 @ 25°C.
*SyFi Reaction Buffer is supplied as a 10X concentrate and should be diluted for use.
*Magnesium Concentration is ideal from 2 to 6mM. Concentration can be increased with provided solution.

Quality Control

SyFi DNA Polymerase is highly purified and free of contaminating endonucleases, exonucleases, and nicking activity. Enzyme purity is evaluated by SDS-PAGE at >95% purity.

Reaction Conditions

Initial Denaturation: 95°C (2-5min.).
Denaturation: 95°C (15-30sec).
Annealing: 55°C-65°C (15-30sec). *In general annealing temperatures tend to be higher than that for Taq DNA Polymerase.
Extension: 72°C (1min./kb).
Final Extension: (5-10min.).

This product is for research purposes only.

1. Jannasch, H.W. et al. 1992. *Applied Environ. Microbiol*. 58, 3472-3481.

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