



**SOLIS  
BIODYNE**

INNOVATION POWERED BY NATURE

SOLIS BIODYNE OÜ

A: Teaduspargi 9, 50411 Tartu, Estonia

E: info@solisbiodyne.com

T: +372 7409 960

# Solis Hot Start HiFi DNA Polymerase Kit

High fidelity polymerase that supports various sequencing applications and challenging PCR

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High fidelity polymerase with  
3'-5' proofreading activity

Great performance in highly  
multiplexed assays

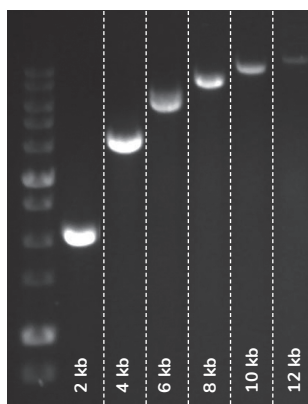
Stable at 25 °C  
for 1 month

**Solis Hot Start HiFi DNA Polymerase** is a high-fidelity enzyme with 3'-5' exonuclease (proofreading) activity, offering >100x greater accuracy compared to wild type Taq polymerase. Its chemical modification enables hot-start PCR, enhancing specificity and accuracy by minimizing mispriming and non-specific primer extension.

Ideal for high-fidelity applications such as sequencing and cloning, this polymerase features enhanced processivity, supporting long-range amplification. Solis Hot Start HiFi DNA Polymerase has novel modifications in the uracil-binding pocket enabling the enzyme to read and amplify templates containing uracil residues. Our unique buffer composition allows reliable amplification of challenging amplicons. Its superior multiplexing capabilities ensure uniform amplification across diverse targets. In addition, Solis BioDyne's proprietary Stability TAG technology ensures unparalleled stability to temperature.

## Increased processivity

**Figure 1. Solis Hot Start HiFi DNA Polymerase Kit** efficiently amplifies human gDNA targets of up to 12 kb. Fragments ranging from 2 kb to 12 kb were amplified from 50 ng of human gDNA (MilliporeSigma) using a single cycling protocol (initial activation 15 min at 95 °C; denaturation 30 sec at 95 °C, annealing 30 sec at 62 °C (26 cycles), then final extension 8 min at 72 °C).



## Features

- **Increased fidelity** >100x compared to wild type Taq
- **Long range PCR** – up to 12 kb gDNA, 24 kb λ-DNA
- **Broad multiplexing capabilities** >18-plex
- **GC-rich PCR** – between **30-79% GC content**
- **Efficient dUTP incorporation** – bisulfite sequencing
- **Inherently stable** due to proprietary **Stability TAG** technology
- **Glycerol-free** version available **upon request**

## Applications

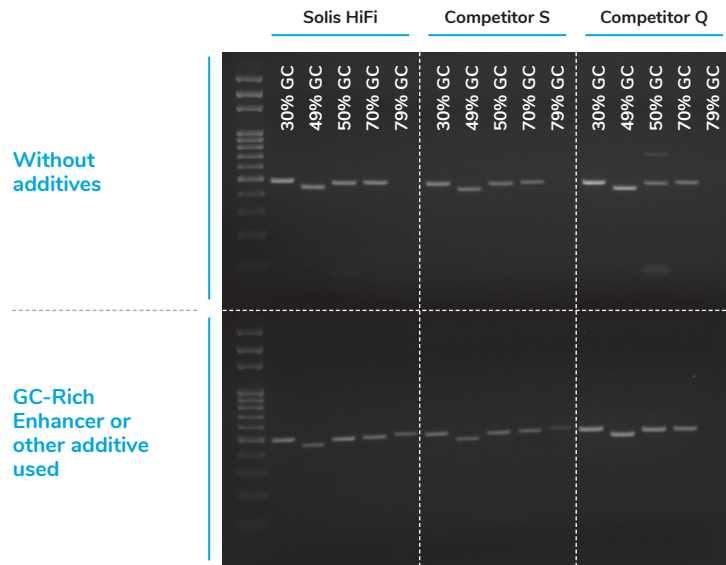
- High fidelity PCR for **sequencing workflows**
- PCR based **cloning, site-directed mutagenesis**
- Challenging PCR – **long range** (12-24 kb), **GC-rich** PCR
- Highly **multiplexed PCR**
- Workflows requiring **dUTP incorporation** - epigenetic studies, **bisulfite sequencing**, damaged DNA (FFPE samples), carry-over prevention with UNG



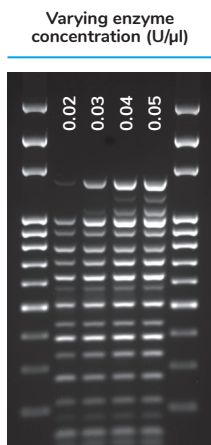
Environment friendly shipping!

## Versatile – great performance with challenging amplicons

**Figure 2. Versatile performance across amplicons with a varying GC content.** Using 50 ng human gDNA (Sigma Fisher Scientific), five ~0.5 kb targets (30–79% GC) were amplified with **Solis Hot Start HiFi DNA Polymerase** and two competitor kits (S and Q). The top lanes show reactions without additives; the bottom lanes include 2.5 µl of 10x GCRich Enhancer for Solis, while competitor kits used their recommended GC buffers/additives or DMSO.

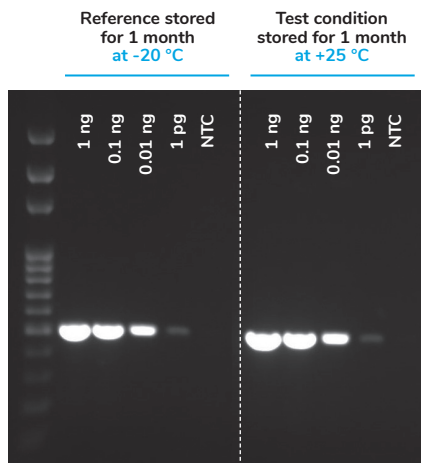


## Great performance in highly multiplexed assays



**Figure 3. Solis Hot Start HiFi DNA Polymerase Kit** was used in multiplex PCR to amplify eighteen fragments ranging from 122 to 1340 bp in a single reaction from 25 ng of human gDNA (MilliporeSigma) using varying concentrations of Solis Hot Start HiFi DNA Polymerase in a 25 µl reaction. Results show efficient amplification of all targets with optimized conditions.

## Exceptional stability – convenient to use, environment-friendly to ship



**Figure 4. Solis Hot Start HiFi DNA Polymerase Kit** shows high sensitivity and stability at 25 °C for 1 month. Solis Hot Start HiFi DNA Polymerase Kit was stored at two conditions – 1 month at +25 °C or -20 °C. Following this, a 0.5 kb fragment was amplified from a serial dilution (1 ng to 1 pg) of lambda DNA (Thermo Fisher Scientific). Results show equivalent performance between the two conditions.

**Lyophilizing your assay?**  
Contact us for a glycerol free version

## Ordering information

Bulk solutions available!

Product	CAT. NO.	Size	Read more
Solis Hot Start HiFi DNA Polymerase Kit	01-16-KIT-0000S (sample) 01-16-KIT-00100 01-16-KIT-00500	25 U (sample) 100 U 500 U	

FL-01-16-KIT-V1



For further details and ordering please contact [orders@solisbiodyne.com](mailto:orders@solisbiodyne.com) or call +372 740 9960

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