SOLIS BIODYNE

INNOVATION POWERED **BY NATURE**

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Solving Your PCR Puzzle

Room temperature stable reagents for (RT)-PCR, (RT)-qPCR, reverse transcription, and isothermal amplification. Lyo-compatible solutions for your own assay development.

Room temperature stability

- Reduced delivery cost
- Reduced footprint
- Worldwide delivery
- Automation friendly

Fast reaction time

- Reduced labor expenses
- Fast results for rapid diagnosis

Inhibitor tolerance

- Faster and cheaper sample preparation
- High sensitivity

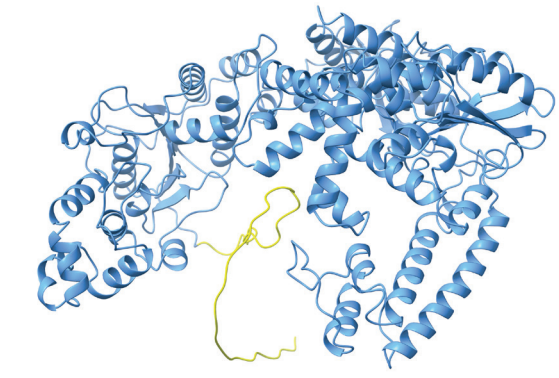
Multiplexing

- Reduced cost per reaction
- More data from one sample
- Multiple pathogen detection

solisbiodyne.com

Signature Stability TAG – unique technology behind the magic

3D MODEL OF FIREPOL® DNA POLYMERASE INCLUDING STABILITY TAG



Thermus aquaticus DNA polymerase Stability TAG

All enzymes produced at Solis BioDyne, including DNA polymerases and reverse transcriptases, as well as other proteins (i.e. RNase inhibitor, uracil-N-glycosylase), are exceptionally stable at room temperature due to a proprietary genetic modification in the polypeptide structure - **Stability TAG**.

All our catalogue products can withstand 1 month at room temperature without detectable change in the performance of the product, which enables shipping our products without ice. The exceptional product stability is furthermore supported by our unique buffer composition. Stability TAG enhances also long-term stability of our enzymes stored at -20°C which is the recommended storage temperature of all our products upon arrival, to ensure maximum shelf-life.

EU Patent EP2501716 | **India Patent** no 343501 | **Korea Patent** No 10-1773636 | **US Patent** No 9,321,999

Save time and money with SolisFAST® product range

Features

- **F**ast – delivers results 2-4x faster
- **A**ccurate – reproducible quantification of up to 5- plex assays with probe-based mixes
- **S**ensitive – consistent results with low- and high-copy targets
- **T**rustworthy – increased room temperature stability up to 6 months adds security and flexibility

SolisFAST® range offers ready-to-use (q)PCR mixes for **fast, highly sensitive and reproducible** (q)PCR assays. Combining our *in silico* designed **inhibitor tolerant SolisFAST® DNA Polymerase** and optimized buffers, the SolisFAST® (q)PCR Mixes enable **robust performance** and accurate target detection in demanding conditions. The product line offers **ice-free shipping** and reaction set-up.

High inhibitor tolerance allows for skipping the sample purification step

Reaction set-up without ice simplifies workflow and saves benchtop space

Reduced reaction time provides faster data for rapid diagnosis

Maximize data generation and reduce labor costs by fitting more experiments into one working day

Multiplex assays yield more data from a single sample

Simultaneous detection of multiple targets reduces the cost per reaction and conserves sample materials

Robust performance with complex samples

		Solis BioDyne		Gold standard Inhibitor tolerant competitors		
Source	Inhibitor	SolisFAST® Probe qPCR Mix (no ROX)	SolisFAST® Probe qPCR Mix (no ROX) With UNG	Competitor Q	Competitor M	Competitor B
Urine	Urea	1.7 M	1.7 M	1.2 M	1.4 M	< 1.2 M
Plants	Pectin	1.6 mg/ml	1 mg/ml	1 mg/ml	0.7 mg/ml	1 mg/ml
Sample prep.	DMSO	11 %	8 %	8 %	11 %	8 %
Sample prep.	NaCl	150 mM	130 mM	110 mM	140 mM	< 90 mM
Sample prep.	PBS (1x, pH 7.2. 7.4)	30 %	30 %	30 %	20 %	20 %
Sample prep.	EtOH	6 %	5 %	4 %	6 %	6 %
Soil	Humic acid	1.4 ng/µl	1.4 ng/µl	1.4 ng/µl	1.4 ng/µl	1.4 ng/µl
Blood	Hematin	3.9 µM	3.9 µM	4.1 µM	4.1 µM	3.9 µM
Total reaction time on Bio-Rad CFX96		47 min		1 h 7 min		

To assess the inhibitor tolerance of the SolisFAST® probe-based qPCR mixes, a qPCR test system, targeting a 72 bp region of human gDNA, was developed and the impact of common PCR inhibitors to the reaction was evaluated. Three gold standard inhibitor tolerant competitor products were also assessed in the same panel. Tolerance limits, meaning the inhibitor concentrations at which the Ct value does not increase by more than 1, are displayed in the table. Fast extension rates of the SolisFAST® DNA polymerase enable shorter run times while still showing strong inhibitor tolerance compared to gold standard inhibitor tolerant competitor products.

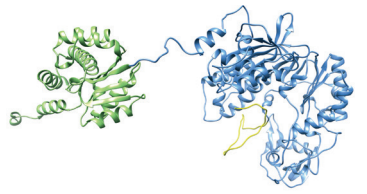
Standalone proteins for your own assay development

Lyo-compatible versions are available!

Reverse transcription in RT-qPCR in just 5 minutes!

SOLIScript® Reverse Transcriptase

- A unique chimeric RT with the Stability TAG
- High specific activity
- High thermostability
- Reduced RNase H activity
- Available as 4000 U/µl high concentrated version
- As standalone enzyme and in kits and mixes

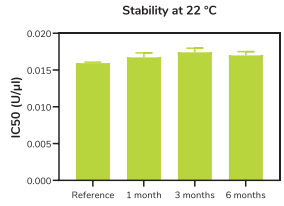


RNase H domain | M-MLV RT | Stability TAG

Guardian of RNA: RNase inhibitor

RiboGrip® RNase Inhibitor

- Protects from RNase A, B and III (C)
- Active at wide range of temperatures up to 60°C
- Clients report:
  - Great performance after air-drying and lyophilization
  - Remarkable stability in lysis buffer

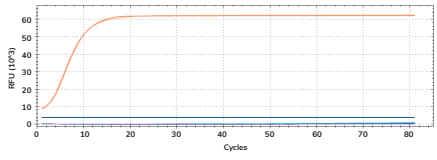


RiboGrip® activity on inhibition of RNase A mediated cCMP cleavage. Samples of RiboGrip® were stored at room temperature (22°C) for 1, 3, and 6 months. Compared to reference stored at -20°C.

Prevent carryover contamination for peace of mind

Salini UNG® Uracil-N-Glycosylase

- Heat-labile enzyme
- Compatible with Sanger sequencing
- Widely used to eliminate carryover contamination in PCR and LAMP
- Fast 30-second reaction time
- Tolerant to common inhibitors



Salini UNG® heat inactivated for 5 min at 70°C

Salini UNG® no heat treatment

Heat inactivation of Salini UNG® Uracil-N-Glycosylase. UNG activity is measured at 37°C for 40 minutes using Bio-Rad CFX96 platform by the release of fluorescence from a uracil containing probe labeled with a FAM fluorophore and a quencher. An active UNG cleaves uracil, the duplex dissociates and FAM fluorescence is emitted. No reactivation was detected after storing the heat-treated samples for 48h.

Yet to discover the optimal solution?

OUR NEW SERVICES:

CONTRACT MANUFACTURING
- Large-scale production
- Primary/secondary production site
- Codon optimization for production in *E.coli*

PRODUCT DEVELOPMENT
- Specific formulations (e.g., high concentrated, glycerol-free etc.)
- (RT-q)PCR master mixes
- Protein design
- Incorporation of the Stability TAG to proteins

ASSAY DEVELOPMENT
- Master mix and/or assay development for specific targets
- Optimization of assay conditions

WHITE LABELING
- Rebrand existing solutions from Solis BioDyne

Initiation
Together we will define the required features of your desired solution. The most suitable service will be chosen

Planning
We will mutually agree on the responsibilities, volumes, timelines, budgets and contractual details

Development / pilot production
We initiate the product or assay development / pilot production

Control & approval
The prototype will be sent to you for testing and approval

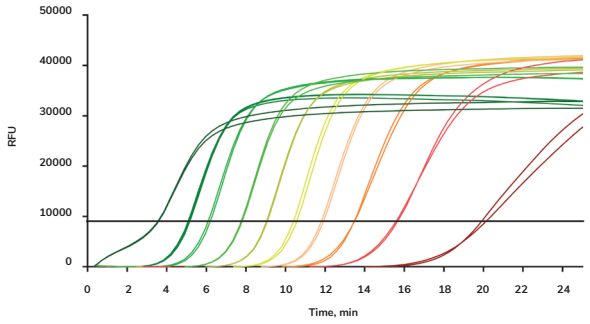
Bulk production & delivery
Together we will define the next steps of bulk production to set you up for success!

NEW! (RT)-LAMP solutions are coming in Q4 2023

SoliSD™ Bsm DNA Polymerase

- Lyo-compatible versions are available
- Fast result in 4-20 minutes
- Active at a wide range of temperatures between 51-62°C
- Unique SoliSD™ Supplement system for NTC signal prevention

FL-AACC-V1



LAMP reactions were performed at 60°C. Lambda DNA target was amplified over ten 10-fold dilutions (from right to left 10^0-10^9 cp/µl).

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For further details and ordering please contact
info@solisbiodyne.com or call **+372 740 9960**