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Features:

DFS-Taq "Hot" is the "Hot-Start PCR" version of DFS Taq DNA Polymerase that provides a new formula in buffers and additives to prevent failures in PCR-applications were inhibitors (e.g. proteins, fat or PS) reduce the performance.

The Taq Polymerase is blocked with monoclonal Antibodies. Both components, the **Taq Polymerase and the Antibody is available, separatly** at GeneON's shop.

The robust enzyme is well suited for sensitive experiments using random primers or bacterial templates. Because of the high sensitivity less than 6 molecules can be detected.

- reliable and reproducable quantification in qPCR
- perfect for real time PCR
- especially for diagnostic purposes
- reaction set-up at room temperature
- activation of enzyme during first heating
- no change or optimization of protocol necessary
- high specifity, reduced primer mismatch or dimers

Application:

Instead of conventionally purified Taq-DNA Polymerase for sensitive PCR reactions, for the detection of bacterial DNA or for applications where inhibitors decrease the performance of regular polymerases.

- Hot start PCR
- Real time PCR
- Amplification of complex genomic and cDNA templates
- Multiplex PCR
- High specifity PCR

Reaction conditions:

Same as for conventionally purified Taq-DNA Polymerase.

Concentration

5 units/µl supplied in 10 mM KPO_4 (pH 7.4 at 25°C), 0.1 mM EDTA, 0.1% Tween 20, 0.1% Triton-X 100 and 50 % (v/v) glycerol.

Unit Definition

One unit is defined as the amount of enzyme required to incorporate 10 nmoles of dNTP into acid-insoluble material in 30 min at 74°C.

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Activity assay: 50 mM Tris-HCl (pH 8.0 at 25°C), 50 mM NaCl, 10 mM MgCl2, 200 µM dATP, 200 µM dCTP, 200 µM dGTP, 50 µM [3H] dTTP, 0,25 mg/ml activated calf thymus DNA.

Storage conditions: -20°C in 50 mM Tris-HCl (pH 8.0 at 25°C), 50 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol and 1% triton X-100.

Quality control: Endo-, exodeoxyribonucleases, ribonucleases free. Free of bacterial DNA-traces

Components	Volume per reaction
10X reaction buffer	5 µl
100 mM $MgCl_2$	Optional
dNTP-Mix (40mM)	1.0 µl
Up-stream primer (10 µM stock)	0.5 - 2.5 µl
Down-stream primer (10 µM stock)	0.5 - 2.5 µl
Template DANN	0.1 - 15 ng/ml plasmid DANN
	1-10 µg/ml genomic DANN
DFS-Hot Taq DANN (5 u/µl)	0.2 - 1.0 µl
Sterile dest. Water (molecular grade)	Up to 50 µl total reaction volume

Note:
- vortex all solutions carefully before using
- add the enzyme after Template DNA
- may you have to optimize the MgCl2 concentration for best result

General Thermo-Cycler protocol:

Step	Time	Temperature
Initial denaturation	2-5min	94-95ºC
25-30 Cycles:		
Denaturation	10-25 sec	94-95ºC
Annealing	10-25 sec	55-65ºC
Extension	60 sec	72ºC per 1kb
Final extension	5 min	72ºC

Note: In case of low amount of DNA template, additionally cycles may be used

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Order information

Prod. No.	Description	Quantity
N9150	DFS Taq "HOT" PLUS DNA Polymeras	500 Units
N9152	DFS Taq "HOT" PLUS DNA Polymeras	5 x 500 Units
N9154	DFS Taq "HOT" PLUS DNA Polymeras	20x 500 Units