SuperHotTaq DNA Polymerase high concentrated & glycerol free, 30 U/µl

Description: SuperHotTaq DNA Polymerase HC-GF is an optimized mixture of recombinant Taq DNA polymerase and anti-Taq DNA polymerase monoclonal antibodies. The polymerase activity is blocked during set-up of the PCR reactions at ambient temperature (20 – 30 °C) by the antibody. The inhibition is completely reversed when the temperature rises above 70 °C. SuperHotTaq DNA Polymerase possesses a 5' - 3' polymerase activity and generates 3'A-overhangs. The PCR products obtained with SuperHotTaq DNA Polymerase are free of unspecific products and primer-dimers. This high concentrated variant without glycerol is especially recommended for kit production that requires lyophilization.

Concentration: 30 units/µl

Storage: -18 °C to - 22 °C for long term, + 2 to + 8 °C for short term

REF	129030HC-GF	colour
SuperHotTaq DNA Polymerase HC-GF	**1000 units**	**blue**
Incomplete NH_4 * Reaction Buffer (10x)	**2x 1.8 ml**	**red**
Complete NH_4 ** Reaction Buffer (10x)	**2x 1.8 ml**	**yellow**
Complete KCl * Reaction Buffer (10x)**	**2x 1.8 ml**	**black**
$MgCl_2$, 100 mM	**2x 1 ml**	**green**

* Incomplete NH_4 Reaction Buffer (10x): pH 8.8, 0.1% Tween 20, free of $MgCl_2$.

** Complete NH_4 Reaction Buffer (10x): pH 8.8, 0.1% Tween 20, 20 mM $MgCl_2$.

*** Complete KCl Reaction Buffer (10x): pH 8.8, 0.1% Tween 20, 15 mM $MgCl_2$.

Application: SuperHotTaq DNA Polymerase is suitable for all regular PCR applications, especially for complex genomic or cDNA templates, low copy number targets, Multiplex and Real-Time PCR. This polymerase effectively amplifies templates up to 5 kb length.

Unit definition: One unit of activity is defined as the amount of enzyme required to incorporate 10 nmoles of dNTP into acid-insoluble DNA fraction in 30 minutes at 72 °C.

- This product is also available with glycerol, see REF 129030HC.
- Do not vortex the polymerase tube (blue) to avoid damaging the enzyme.

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Recommended Standard Protocol:

Component	20 µl Reaction	Final Concentration
10x Reaction Buffer	2 µl	1 x
SuperHotTaq DNA Polymerase, diluted to 5 U/µl	0.2 µl	1 U
Forward Primer	Variable	100 – 400 nM
Reverse Primer	Variable	100 – 400 nM
dNTP Mix (10 mM)	0.4 µl	200 µM each
Template DNA	Variable	0.01 – 10 ng per reaction
PCR Water	adjust to 20 µl final volume	--

Recommended Thermocycler Protocol

Step	Time	Temperature	Cycles
Initial Denaturation	3 minutes	92 – 95 °C	1 x
Denaturation	5 -10 seconds	92 – 95 °C	25 – 35 x
Annealing	5 -10 seconds	55 – 68 °C*	
Extension	30 seconds per 1 kb amplicon length	72 °C	

* Depends on primer, the optimal annealing temperature is usually 2 – 5°C below the primer melting temperature

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