Vers. 01/2016

PRODUCT DATA SHEET

Description **Taq M polymerase**

REF	Quantity	Components
Taq M polymerase		
19-08	**200 U**	Taq M polymerase (5 U/µl): 40 µl A*: 500 µl, B*: 500 µl, C*: 500 µl $MgCl_2$ (25 mM): 500 µl
	1000 U	Taq M polymerase (5 U/µl): 2x100 µl A*: 2x1000 µl $MgCl_2$ (25 mM): 2x1250 µl
	5000 U	Taq M polymerase (5 U/µl): 2x500 µl A*: 10x1000 µl $MgCl_2$ (25 mM): 10x1250 µl
Taq M polymerase (Green)		
19-08-g	**1000 U**	Taq M polymerase (5 U/µl): 2x100 µl B*: 2x1000 µl $MgCl_2$ (25 mM): 2x1250 µl
	5000 U	Taq M polymerase (5 U/µl): 2x500 µl B*: 10x1000 µl $MgCl_2$ (25 mM): 10x1250 µl
Taq M polymerase (Red)		
19-08-r	**1000 U**	Taq M polymerase (5 U/µl): 2x100 µl C*: 2x1000 µl $MgCl_2$ (25 mM): 2x1250 µl
	5000 U	Taq M polymerase (5 U/µl): 2x500 µl C*: 10x1000 µl $MgCl_2$ 25 (mM): 10x1250 µl

A* 10x PCR buffer without Mg^{2+} for Taq M polymerase
B* 10x PCR buffer (Green) without Mg^{2+} for Taq M polymerase
C* 10x PCR buffer (Red) without Mg^{2+} for Taq M polymerase

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Enzyme property

- Highly effective hot start – **15 minutes, 95 °C;**
- 5' → 3' DNA polymerase and a 5' → 3' exonuclease activity;
- Absence of 3' → 5' exonuclease activity;
- Molecular weight ≈94 kDa;
- Optimal conditions – 74 °C, at pH 8,8;
- Transferase activity: adds a single deoxyadenosine (A) to the 3' ends of the PCR products, it is used for A/T cloning methods.

Unit Definition	1 unit (U) of Taq DNA Polymerase = the amount of enzyme that will incorporate 10 nmol of dNTPs into acid-insoluble material within 30 min at 74°C.
Storage buffer	20 mM Tris pH 8.0; 100 mM KCl; 0,1 mM EDTA; 1 mM DTT; 0,5 % Tween 20; 50% glycerol; 0,05% Nonidet P40
Transport	Max 7 days at room temperature
Storage	Store at -18 … -30°C
Shelf life	2 years

Description

Taq M polymerase is a chemically modified recombinant Taq DNA polymerase. The enzyme is inactive at room temperature, avoiding extension of non-specifically annealed primers or primer dimers and providing higher specificity of DNA amplification. The functional activity of the enzyme is restored during a 15 minute incubation at 95°C. It provides high yield of PCR products from different DNA templates.

10x PCR buffer without Mg^{2+} for Taq M polymerase – is suitable for highly specific and sensitive PCR, multiplex PCR, Real-Time PCR.

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10x PCR buffer (Green) without Mg^{2+} for Taq M polymerase – is suitable for multiplex PCR and provides high yield of PCR products. The buffer contains a compound that increases sample density so that samples sink easily into wells of an agarose gel. The green buffer also contains two dyes (blue and orange) that separate to allow easy monitoring during electrophoresis. The blue dye migrates with ≈400 bp DNA fragments in a 1% agarose gel and orange blue migrates faster than ≈20 bp DNA fragments.

10x PCR buffer (Red) without Mg^{2+} for Taq M polymerase - is suitable for multiplex PCR and provides high yield of PCR products.. The buffer contains a compound that increases sample density so that samples sink easily into wells of an agarose gel. The red buffer also contains tracking red dye for direct loading of PCR products on gels. The red dye migrates with ≈50 bp DNA fragments in a 1% agarose gel.

Use the green/red reaction buffer for direct-to-gel analysis after amplification and the colorless reaction buffer for amplifications where the dyes may interfere with post-amplification analysis such as fluorescence or absorbance testing.

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