

Catalogue No: CB-4090-1 1000u
CB-4090-5 5000u

Description: ChromaTaq DNA Polymerase contains our thermostable Taq-Pro DNA polymerase purified from *Thermus aquaticus* (1) with a colored 10x reaction buffer that contains 2 inert dyes. ChromaTaq offers consistent results across a wide range of assays. ChromaTaq leaves an A' overhang such that the primer extension product is suitable for effective integration into TA cloning vectors.

The red and orange dyes in the reaction buffer separate during electrophoresis and provide easy and quick reference points to monitor mobility of samples in the gel (see table below). The reaction mixture containing the colored dyes can be loaded directly onto an agarose gel for analysis, without the need for loading buffer. The presence of the dyes has no effect on routine enzymatic manipulations, although rare exceptions may exist.

Approximate Migration of the dyes in 10x reaction buffer relative to DNA fragments

% Agarose Gel	Red Dye	Orange Dye
0.7	1.5kb	100bp
1.0	750bp	25bp
1.5	500bp	10bp
2.0	250bp	<10bp
3.5	75bp	<10bp

Storage buffer: 20mM Tris-HCl, pH 7.5, 100mM NaCl, 0.1mM EDTA, 2mM DTT, 50% Glycerol, and 0.1% Tween-20

Additional reagents supplied: 10x NH₄ based ChromaTaq Reaction Buffer: containing inert dyes
MgCl₂ Stock Solution: 50mM MgCl₂ (suggested final concentration 1.5mM - 4mM).

Reaction Conditions (for a 50µl volume)

10x ChromaTaq reaction buffer	5 µl
50mM MgCl ₂ Solution	1.5 - 4.0 µl
100mM dNTP Mix (see below)	0.5 - 1.0 µl
Template and Primers	as required
Enzyme	1.0 - 3 µl
Water (ddH ₂ O)	up to 50 µl

Denature: 94-96°C
Elongate: 70-72°C (allowing 15-30 seconds/ kb)

This data is intended for use as a guide only; conditions will vary from reaction to reaction and may need optimization.

Specificity and Performance of the ChromaTaq DNA Polymerase can be increased with the use of **2x Clear Band** (not supplied), that is designed for GC- or AT-rich DNA, "dirty" templates or sequences

with difficult melting profiles.

Storage Conditions ChromaTaq DNA Polymerase can be stored at -20°C, in a constant temperature freezer for 12 months. ChromaTaq will remain stable if stored as specified.

Storage Conditions of 10x Reaction Buffer: Repeated freeze-thaw cycles will affect the stability of Buffer. The Buffer will remain stable at +4°C for a minimum of one month.

Storage buffer: 20mM Tris-HCl, pH 7.5, 100mM NaCl, 0.1mM EDTA, 2mM DTT, 50% Glycerol, and 0.1% Tween-20

Unit Definition One unit is defined as the amount of enzyme that incorporates 10nmoles of dNTPs into acid-insoluble form in 30 minutes at 72°C.

Batch details: Batch No: See vial
Units per vial: See vial
Concentration: See vial

References: (1) Kaledin, A.S., Slyuisarenko, A.G. and Gorodetskii, S.I. (1981) *Biokhimiya* 46, 1576

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