Kyratec.

Product Datasheet

X-*Chromo* DNA Polymerase (recombinant)

Cat No.

XT62002	250 Units
XT62005	500 Units

Features

- Thermostable enzyme of approximately 94kDa from Thermus aquaticus
- Ultra pure recombinant protein.
- Replicates DNA at 74°C and exhibits a half-life 40 minutes at 95°C.
- Generates mostly 3' dA overhang PCR products which are suitable for TA cloning

Description

X-Chromo Taq DNA Polymerase is a thermostable DNA polymerase. It is suitable for applications requiring high temperature synthesis of DNA. Taq DNA Polymerase catalyzes the polymerization of nucleotides into duplex DNA in the 5' to 3' direction with the presence of Mg^{2+} but maintains the 5' to 3' exonuclease activity. The enzyme is supplemented with indicators for ease of visualization of the addition of polymerase to the reaction.

Product Specifications

Concentration: 1U/ul

Supplied with

	250 Unit	**500 Unit**
X-*chromo Taq* DNA Polymerase	250 uL	500 uL
10x Buffer A	1.2 mL	2 x 1.2 mL
50mM $MgCl_2$	1 mL	1 mL
10mM dNTP mix	1 mL	1 mL

Reation Buffer

10X Buffer A (without $MgCl_2$):
500mM KCl, 100mM Tris-HCl (pH 9.1 at 20°C) and 0.1% Triton™ X-100. The buffer is optimized for use with 0.1 - 0.2mM of each dNTP.

Storage Buffer

20mM Tris-HCl (pH 8.0 at 22°C), 100 mM KCl, 0.5% Tween™ 20, 0.5% Nonidet-P40, 0.1mM EDTA, 1mM DTT, color dyes and 50% glycerol.

Storage Conditions

X-*Hot Taq* DNA Polymerase can be stored for 12 month at -20°C.

Shipping Conditions

On Dry Ice or Blue Ice.

Quality Control

All preparations are assayed for contaminating endonuclease, exonuclease, and non-specific DNase activities. Functionally tested in DNA amplification.

Unit Definition

1u is defined as amount of enzyme that required to catalyze the incorporation of 10nmoles of dNTP into acid-insoluble material in 30 minutes at 74°C.

PCR Reaction Conditions (for a 50uL reaction)

10x Buffer A	5 uL
X-*chromo* DNA Polymerase (1 units/uL)	2.0 - 2.5 uL
50mM $MgCl_2$	1.0 - 2.0 uL
10mM dNTP mix	1.0 uL
Template	〈 500 ng
Primers	0.2 - 1.0 uM
Water (ddH_2O)	up to 50 uL

PCR Condition

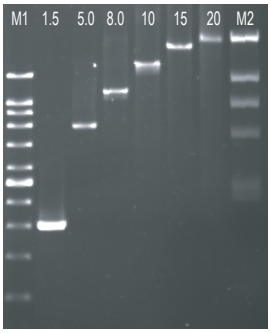
Pre Denaturation	94°C, 2 min
Denaturation	94°C, 30 sec
Annealing	50 - 68 °C, 30 sec
Extension/1kb	72°C, 30 sec
Cycles	35 cycles
Final Extension	72°C, 7 min

Notes:

Denaturation condition varies depending on an used thermal cycler and tube. It is recommended for 10 - 30 sec. at 94°C.

The suggested final concentration of Mg^{2+} in the reaction is likely to be 2 - 4 mM, but some optimization may necessary to achieve the best possible results.

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



Amplification Using X-ChromoTaq DNA Polymerase

Lane M1	: 1kb DNA Ladder
Lane 1.5kb	: 1.5kb PCR product generated using 0.2mM dNTPs and 2.0u X-Choromo Taq DNA Polymerase.
Lane 5kb and 8kb	: 5kb and 8kb PCR products generated using 0.25mM dNTPs, 2.5u X-Chromo Taq DNA Polymerase and 3% of formamide.
Lane 10kb-20kb	: 10kb, 15kb and 20kb PCR products generated using 0.36mM dNTPs, 2.5u X-Chromo Taq DNA Polymerase and 3% formamide.
Lane M2	: Lambda / Hind III Marker

0.5% TAE agarose gel, 5V/cm