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High Activity Taq w/ Red Loading Dye

Catalogue Numbers:

DNP-100R 500 Units
DNP-200R 2500 Units

Features

- Easy visual recognition
- Direct loading onto agarose gels
- Same high performance as High Activity Taq Polymerase
- Leaves 'A' overhang
- Available as a ready-to-use 2x reaction mix (2x Red Taq Mastermix)

Applications

- Routine PCR applications
- Products suitable for TA cloning
- High throughput applications

Description

PHENIX High Activity Taq with Red Loading Dye is a formulation of our regular High Activity Taq Polymerase, which contains a non-toxic and non-hazardous red dye. The red dye provides easy and quick identification of reactions to which the enzyme has been added, and facilitates the confirmation of complete mixing. When the reaction is complete, a sample of the reaction mix can be loaded directly onto the agarose gel without the need for loading buffer, since the mix is of sufficiently high density to sink to the bottom of the gel. The red dye migrates towards the positive electrode, thereby providing a means to monitor the progress of the electrophoresis.

The presence of the dye has no effect on routine enzymatic manipulations, although rare exceptions may occur. To produce a reaction of sufficient density to allow for the direct loading of a sample onto a gel, we recommend using a minimum of 1.5u per 50µl reaction.

Specificity and performance of High Activity Taq with Red Loading Dye can be further improved with the use of 2x PolyMate Additive (not supplied, see associated products), which is designed for GC- or AT-rich DNA, "dirty" templates or sequences with a high level of secondary structure.

Reaction Conditions (for a 50µl volume)

10x NH ₄ Buffer	5µl
50mM MgCl ₂ Solution	1.5 - 4.0µl
100mM dNTP Mix (see below)	0.5 - 1.0µl
Template and Primers	as required
High Activity Taq (Red)	1.0 - 2.5µl
Water (ddH ₂ O)	up to 50µl

PHENIX 100mM dNTP Mix is available as a separate product (Catalogue number DNTP-250)

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

Product Specifications

Batch details:

Batch No: See vial
Units per vial: See vial
Concentration: 1u/ μ l

Components

High Activity Taq with Red Dye	500 Units	2500 Units
High Activity Taq with Red Dye	500 μ l	5 x 500 μ l
10x NH ₄ Reaction Buffer	2 x 1.2ml	10 x 1.2ml
50mM MgCl ₂ Solution	1.2ml	1.2ml

Reaction Buffer: NH₄ Buffer (10x): 160mM (NH₄)₂SO₄, 6710mM Tris-HCl (pH 8.8 at 25°C, 0.1%.

MgCl₂ Stock Solution: 50mM MgCl₂ (suggested final concentration 1.5mM – 4mM).

Storage Buffer:

20mM Tris-HCl, pH 7.5, 100mM NaCl, 0.1mM EDTA, 2mM DTT, 50% Glycerol, and 0.1% stabilizers.

Storage Conditions:

High Activity Taq (Red) can be stored for 12 months at -20°C.

Shipping Conditions:

On Dry Ice or Blue Ice

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.

Associated Activities:

Endonuclease and exonuclease activities were not detectable after 2 and 1 hour incubations, respectively, of 1 μ g Lambda DNA and 0.22 μ g of *EcoR* I-digested Lambda DNA at 72°C in the presence of 15-20 units of High Activity Taq (Red).

Associated Products: Product Name	Pack Size	Cat No
dNTP Set 100mM	4 x 250 μ 4 x 1ml	DNTP-250 DNTP-1000
dNTP Mix	500 μ l 4 x 500 μ l	DNTP-M500 DNTP-M500-4