x-VITA™ MasterMix for PCR (2x)

TAQM-S02-001

Description

The x-VITA™ MasterMix (2X) is an optimized ready-to-use master mix that contains all PCR reaction components: dNTPs, PCR buffer, Mg^{2+} and Taq DNA polymerase. Only primers and template need to be added. The convenient 2x master mix formulation saves time and eliminates the risk of contamination due to a reduced number of pipetting steps required.

Features

- ✓ Ready-to-use
- ✓ Adds extra nucleotides (preferentially adenine) without template at 3´ends leaving 3´overhangs PCR fragments. This fact allows the popular TA-cloning or GC cloning

Applications

- ✓ Design for medium or high throughput applications (e.g. colony screening)
- ✓ PCR fragments amplification for TA or GC cloning
- ✓ High-throughput PCR

Unit definition

One unit is defined as the amount of enzyme required to catalyse the incorporation of 10 nmol of dNTPs into acid-insoluble material in 30 minutes at 74°C.

Unit assay conditions

Enzyme activity is assayed in the following mixture: 25mM Tris-HCl pH 9.0 at 25°C, 50mM KCl, 2mM MgCl2, 0.1mg/mL gelatine, 200 µM de dATP, dGTP, dTTP, 100µM[α32-P]dCTP (0.05µCi/nmol) and 12.5 µg activated salmon sperm DNA.

Concentration

Buffer PCR 2X; dNTPs 0.4 mM each dNTP (dATP, dCTP, dGTP and dTTP); 4 mM $MgCl_2$; Taq DNA polymerase 0.1 U/µL and Glycerol 4%.

Quality Certifications

- ✓ Functionally tested in PCR
- ✓ Undetected bacterial DNA (by PCR)
- ✓ Undetectable nucleases activity (endo-, exo, and ribo-)

Storage

Store at -20°C.

Product use limitation

This product is developed, designed and sold exclusively for research purposes and use only. The product is not intended for diagnostics or drug development, nor is it suitable for administration to humans or animals.

Recommended PCR assay (20 µl assay)

The following protocol can be used as a starting point for reaction optimization. The optimal conditions will vary from reaction to reaction and are dependent on the template/primers used.

Taq DNA Polymerase2X Master Mix	10µl (1X)
Forward Primer (15µM)	1µl (0.75 pmol/µL)
Reverse Primer (15µM)	1µl (0.75 pmol/µL)
Template DNA	Plasmide: 30-75ng gDNA: 100-500ng
PCR grade H_2O	up to 20 µl

Cycling instructions: 94ºC 5:00, 25-30x (94ºC 0:35, Tm 0:35, 72ºC 1'/kb), 72ºC 7:00, 4ºC ∞)