

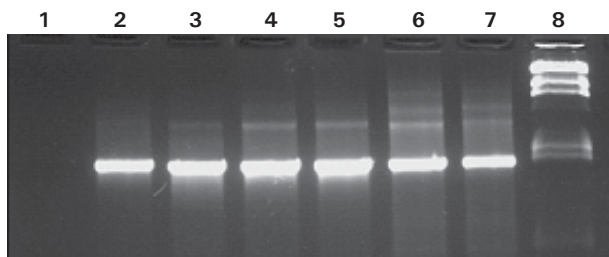
GeNei™ PCR Optimising Kit

Description: It is known that the nature of template DNA and primer sequences influence PCR conditions. So PCR optimization needs to be done often when working with various template/primer pairs. Magnesium ion concentration and pH of the reaction mix are the main parameters that may vary between different applications. In addition, certain additives like DMSO and glycerol may increase the specificity of the products.

PCR optimizing kit has a set of 16 ready to use reaction buffers of varying pH and magnesium ion concentrations covering a range often used in reaction conditions. Two additives are also supplied to increase specificity. Enough buffers provided to perform 50 individual PCRs for 50 µl reaction volume.

Application:

- This kit is useful in optimising a PCR for a given template / primer pair.
- Ready to use buffers save time and minimise the possibility of contamination.



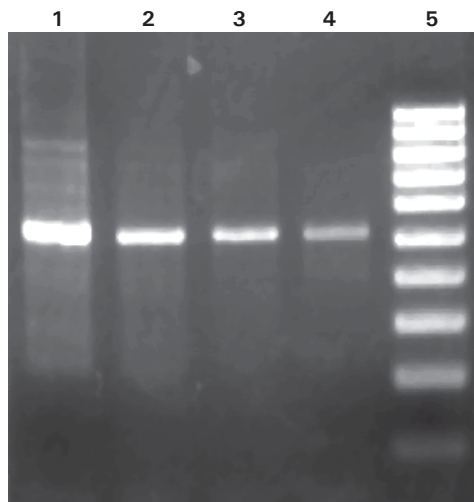
Effect of MgCl₂ concentration on specificity of PCR amplification.

A 2 kb fragment of T7 DNA was amplified using different MgCl₂ concentrations.

- Lane 1: 0.5 mM MgCl₂
- Lane 2: 1 mM MgCl₂
- Lane 3: 1.5 mM MgCl₂
- Lane 4: 2 mM MgCl₂
- Lane 5: 2.5 mM MgCl₂
- Lane 6: 3.5 mM MgCl₂
- Lane 7: 4 mM MgCl₂
- Lane 8: Lambda / Hind III Digest

Ordering Information:

Product	Size	Cat #
GeNei™ PCR Optimising Kit	1 Pack	105578



Effect of additives on the yields and specificity of PCR amplification

A 500 bp fragment of the G3PDH gene was amplified from genomic DNA of HeLa cells.

- Lane 1: Standard PCR conditions
- Lane 2: With addition of 5% DMSO
- Lane 3: With addition of 5% Glycerol
- Lane 4: With addition of 5% DMSO & 5% Glycerol
- Lane 5: 100 bp ladder

Storage: -20°C

Materials provided:

1. Set of 16 ready-to-use 10X reaction buffer (1X): 10 mM Tris-HCl (pH 8.0 - 9.5), MgCl₂ (1.5 to 3.5 mM), 50 mM KCl and 0.01% gelatin.
2. Dimethyl Sulfoxide (DMSO)
3. 50 % (w/v) Glycerol
4. 500 mM (NH₄)₂ SO₄ Solution
5. Instruction Manual.

TOOLS FOR GENOMIC RESEARCH