EUROPE
LIEGE SCIENCE PARK • 4102 Seraing • Belgium • Tel.: +32 4 372 74 00
Fax: +32 4 372 75 00 • info@eurogentec.com • www.eurogentec.com

NORTH AMERICA
ANASPEC - 34801 Campus Drive • Fremont, CA 94555 • USA
Tel.: 510-791-9560 • toll-free: 800-452-5530 • Fax: 510-791-9572
info.anaspec@eurogentec.com • www.eurogentec.com

Eurogentec
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Red'y'Gold Mix
PK-0064-02R • PK-0064-02RSA

Eurogentec products are sold for research or laboratory use only and are not to be administrated to humans or used for medical diagnostics.

Description
The ready to use 2x Red'y'Gold Mix contains GoldStar® *Taq* DNA polymerase, dNTPs, $MgCl_2$ and buffer. To prepare amplification, only add your primers, template DNA and water to the Mix. The 2x Red'y'Gold Mix also contains a red dye buffer to enable immediate loading on agarose or polyacrylamide gels following the DNA amplification.

Package contents

Reagent	Volume	Description
Red'Y'Gold Mix PK-0064-02R PK-0064-02RSA	5 x 1ml 1ml	2 X PCR Mix: Goldstar®, dNTPs, $MgCl_2$, buffer, red loading dye
$MgCl_2$ 25 mM	1 ml	Additional 25 mM $MgCl_2$ for optimization if needed (see table behind)

Shipping conditions
Shipped on dry ice.

Storage conditions and stability
Red'y'Gold Mix can be stored at -20 °C (in a constant temperature freezer) for 24 months or at 4 °C for 3 months. Do not repeat more than 10 freeze/thaw cycles.

Quality control
Each lot is tested for activity by PCR. Using λ DNA as template we guarantee an amplification of at least 10^5 fold.

Unit Definition
One unit of enzyme is defined as the amount required for incorporation of 10 nmoles of dNTPs into acid - insoluble material after 30 minutes amplification at 72 °C under the standard reaction conditions.

Reaction conditions
25 µl of the 2x Red'y'Gold Mix diluted to a final volume of 50 µl will give a reaction medium that contains 1 units of GoldStar® DNA polymerase, 200 µM dNTPs, 1.5 mM $MgCl_2$, 20 mM $(NH_4)_2SO_4$, 75 mM Tris-HCl (pH 8.8 at 25 °C), 0.01% (v/v) stabilizer and red dye loading buffer.

Procedure
1. Thaw vial, mix and place on ice.
2. To 25 µl of Red'y'Gold Mix, add 0.1 nmol of primers, <1µg of template DNA and H_2O to bring the total reaction volume to 50 µl.

Standard cycling conditions

35 cycles:

Denaturation		*20 sec at 94°C*
Annealing		*20 sec at 62°C*
suggested	*Elongation*	*30 sec at 72°C*

Time and temperature for denaturation and annealing steps depend on the type of machine and primers. We advise that you check primer design using primer design software.

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$MgCl_2$ optimization

$MgCl_2$ final concentration	2× PCR Mix	$MgCl_2$ (25 mM)	Primers, template, H_2O
1.5 mM	25 µl	0 µl	25 µl
2.0 mM	25 µl	1 µl	24 µl
2.5 mM	25 µl	2 µl	23 µl
3.0 mM	25 µl	3 µl	22 µl
3.5 mM	25 µl	4 µl	21 µl
4.0 mM	25 µl	5 µl	20 µl
4.5 mM	25 µl	6 µl	19 µl
5.0 mM	25 µl	7 µl	18 µl

Related products

Reagent	Pack size	Reference
dNTP Mix 20 mM total	1 x 20 µmol 5 x 20 µmol	NU-0010-10 NU-0010-50
dNTP Set 100 mM total	4 x 25 µmol	NU-0020-50
Goldstar® Mix	5 x 1 ml	PK-0064-02
SmartLadder DNA ladder	1000 lanes	MW-1700-10
Molecular Biology Grade Agarose	100 g 500 g 1000 g	EP-0010-01 EP-0010-05 EP-0010-10
Mupid®-One electrophoresis system	1	MU-0041

For further information please contact our Customer Help Desk:

For Europe:
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