HB220421

PCR Enhancer

Product Information

Product Name	Cat#	Size
PCR Enhancer	10117ES03	1 mL
	10117ES50	50 mL

Product Description

PCR Enhancer is a mixed additive composed of multiple components. In PCR reaction, PCR Enhancer can effectively reduce the melting temperature of high GC templates and templates with complex secondary structure, and greatly reduce the influence of DNA secondary structure on PCR, which increases the sensitivity and specificity of PCR reaction, and is compatible with almost all DNA polymerase amplification systems. When the optimized PCR program cannot effectively amplify the target fragment, adding PCR Enhancer can often get excellent results. This product may reduce PCR fidelity. Therefore, use it with caution when performing high-fidelity PCR.

Quality Control

Exonuclease residue detection: 10 μL of this product and 1 μg of λDNA-Hind III were incubated at 37°C for 4 h, and the electrophoretic bands of DNA did not change.

Endonuclease residues detection: 10 μL of this product and 1 μg of λDNA were incubated at 37°C for 4 h, and the electrophoretic bands of DNA did not change.

Protocols

This product is at a 5× concentration, and the recommended final concentration is 1×. For example, in a 50 μL reaction system, add 10 μL PCR Enhancer.

Shipping and Storage

The product is shipped with ice packs and can be stored at -20°C for 2 years.

Product Notes

1. For your safety and health, please wear lab coats and disposable gloves for operation.
2. This product is for research use **ONLY**!

Application

Using the human genome as a template, a fragment with a GC content of 72% was amplified using Taq DNA Polymerase.

Recommended PCR System (on ice during the experiment)

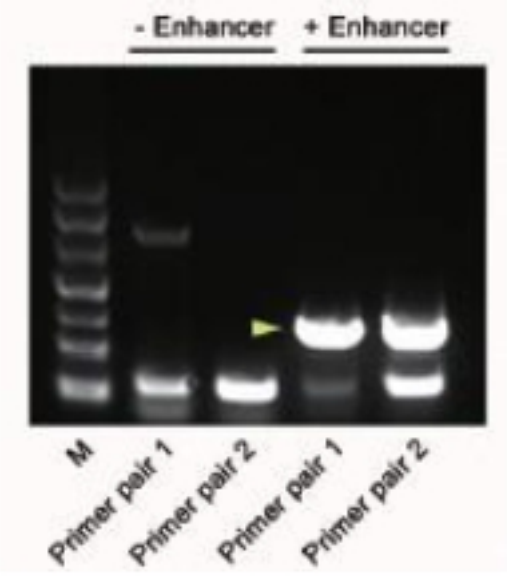
Components	Volume	Final Concentration
ddH_2O	to 50 μL	-
10xPCR Buffer (with 15 mmol/L $MgCl_2$)	5 μL	1x
dNTP Mix (10 mmol/L each)	1 μL	0.2 μmol/L
PCR Enhancer	10 μL	1x
DNA template	100ng	2 ng/μL

Forward Primers (10 μmol/L)	2μL	0.4 μmol/L
Reverse Primers (10 μmol/L)	2μL	0.4 μmol/L
Taq DNA Polymerase (5 U/μL)	0.4 μL	2 U/50 μL

Thermal cycling protocol

Cycle step	Temperature	Time	Cycles
Initial denaturation	95℃	5 min	1
Denaturation	95℃	30 sec	30
Annealing	55℃	30 sec	
Extension	72℃	60 sec/kb	
Final Extension	72℃	7 min	1

Agarose gel electrophoresis detection



A fragment of 690 bp in size and 72% GC content was amplified with Taq DNA Polymerase. The target fragment indicated by the arrow can only be amplified by adding 5×PCR Enhancer.

M: DNA Marker III.