PCR Enhancer

Catalog # P021

Version 5.1

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Introduction

During PCR reactions, the DNA fragments with high GC content are often difficult to amplify because they may form a stable secondary structure. Under the condition of conventional PCR, DNA polymerase can barely get touch with the secondary structure with high GC content. The PCR Enhancer is a mixed additive consisting of various ingredients, which can effectively reduce the melting temperature of templates with high GC and with complex secondary structure. The addition of PCR Enhancer can often provide you unexpected results when optimizing the PCR program cannot help to obtain the target fragments.

Package Information

Components	P021-01
PCR Enhancer	500 μl

Storage

Store at -20℃.

Experimental Case

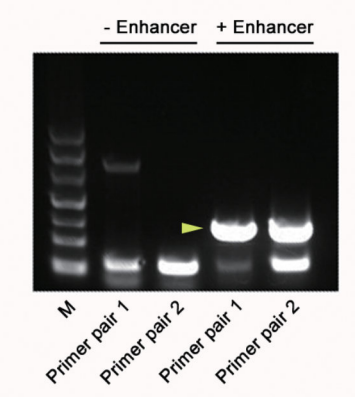
Use human genome as template and amplify DNA fragment with 72% GC content using Taq DNA Polymerase.

1. The following reaction system (left table) is prepared in the micro-centrifugal tube and PCR amplification is carried out according to the right table procedure:

ddH_2O	To 50 μl
10× Taq Buffer (with 15 mM $MgCl_2$)	5 μl
dNTP Mix (10 mM each)	1 μl
PCR Enhancer	10 μl
Template DNA	100 ng
Primer F (10 μM)	2 μl
Primer R (10 μM)	2 μl
Taq DNA Polymerase (5 U/μl)	0.4 μl

94°C	5 min (Pre-denaturation)	
94°C	30 sec	
55°C	30 sec	30 cycles
72°C	60 sec/kb	
72°C	7 min	
4°C	Hold	

2. Agarose gel electrophoresis assay:



With plasmid as template, primer pair 1 or primer pair 2 as primers, use Taq to amplify 690 bp DNA fragment with 72% GC content. Only by adding PCR Enhancer can we obtain the target fragment indicated by the arrows.

M, DNA Marker