Tinzyme Co., Limited

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Multiplex bisDNA probe Mixture

Product Number:PCM17

Shipping Condition

-20℃, try to avoid repeated freeze-thaw cycles as much as possible

Components

Component	PCM17
2×Multiplex bisDNA probe Mixture(for bisDNA)	1mL
ddH_2O	1mL

Description

The Multiplex bisDNA probe Mixture (for bisDNA) contains a premix of Taq DNA Polymerase, dNTP, Mg^{2+}, and Buffer buffer systems at a concentration of 2×, and DNA methylation is mostly modified using bisulfite. This process can easily cause DNA degradation or fragmentation, affecting the amplification efficiency of PCR reactions. The optimization of the Buffer system and the regulation of dNTP and Mg^{2+}concentrations in this product can effectively improve the stability and specificity of transformed DNA amplification. This product contains double antibody modified and blocked Taq enzyme, which does not have enzyme activity at room temperature and can effectively inhibit non-specific amplification at room temperature. In addition, this product has characteristics such as salt resistance, Mg^{2+}resistance, and high fidelity in PCR experiments, greatly improving the simplicity of experimental operations.

Note

1. Before use, please gently mix upside down to avoid foaming, and use after briefly centrifugation.
2. This product should be stored at -20℃ away from light and should avoid repeated freeze-thaw cycles, otherwise it may cause a decrease in product performance. If frequent use is required in the short term, it can be stored at 2-8℃.

Protocol

The following are examples of conventional PCR reaction systems and reaction conditions. In practical operation, corresponding improvements and optimizations should be made based on specific uses, templates, primer structures, target fragment sizes, and amplification effects.

1. PCR reaction system

Extraction of DNA amplification reaction system:

Reagent	25μL System	50μLSystem	Final Conc.
2×Multiplex bisDNA probe Mixture(for bisDNA)	12.5μL	25μL	1×
Primer Mix,10μM each	1μL	2μL	1×
Template DNA	XμL	XμL	
ddH_2O	Up to 25μL	Up to 50μL	

Note: 1) Typically, a primer concentration of 0.2μM can yield good results, and can be used as a reference for setting the range from 0.1 to 1.0μM.

2) The concentration of the probe used is related to the fluorescent quantitative PCR instrument used, the type of probe, and the type of fluorescent labeling substance. Please refer to the instrument manual or the specific usage requirements of each fluorescent probe for concentration adjustment during actual use.

3) The amount of DNA template is usually based on 10-100 ng genomic DNA or 1-10 ng cDNA as a reference. Due to the different copy numbers of target genes contained in templates of different species, gradient dilution can be applied to the template to determine the optimal template usage.

2. PCR reaction program

Step	Temperature	Time	Cycles
Pre denaturation	95℃	30 s	1
Denaturation	95℃	10 s	45
Annealing/Extension	60℃(Depending on primers)	30 s	

Note: A two-step PCR reaction program is used. If the signal is low or the CT value is high due to the use of primers with low Tm values, a three-step PCR amplification can be attempted.