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User's Manual and Instructions

Primer Pair

Catalog Number: IXXXXXXX

Description
At each step of design, production, and validation, BioChain's Primer Pairs must meet rigorous standards of quality control. Primer Pairs are designed according to certain key parameters, such as specificity, length, optimal ratio of AT to GC, secondary structure, stability, and Tm. All primers are optimized to multiple PCR reactions under the same PCR reaction conditions. Therefore, PCR reaction with different primer sets can be applied simultaneously on the same instrument or the same tube. The PCR products or sequences of Primer Pairs are confirmed through the size of PCR product, restriction mapping or nested PCR analysis. Every set of primers is tested and quality controlled by verifying these parameters

Component
50 µl 5' Primer at 5 µM concentration
50 µl 3' Primer at 5 µM concentration
10 µl positive control cDNA (May not be available for some primer pairs)

Storage
Primer Pair is stable for up to one year at -20° C in a non-frost free freezer. Aliquot in single use portions.
Avoid repeated freeze-thaw cycles.

Control PCR Condition

PCR Template	x µl
10 x PCR Buffer	5 µl
10 mM dNTP	2 µl
5' primer (5 µM)	2 µl
3' primer (5 µM)	2 µl
Taq Polymerase(5 u/µl)	0.5 µl
H2O, Nuclease-free	x µl
Total	50 µl

PCR Program
94°C x 2 minutes followed by 35 cycles of 94°C x 30 seconds, 55°C x 30 seconds, 72°C x 30 seconds; then 72°C x 5 minutes. Hold at 4°C in the end.

Analysis of Results
Electrophoresis PCR product on 0.8-1.2% TAE agarose gel with ethidium bromide, and visualize the band under UV light.

Troubleshooting

Problem	Suggestion
No PCR products obtained	Run positive control Check the RNA quality and cDNA synthesis procedure if the template is cDNA.
Unexpected size band(s) or smear	Non-specific bind may happen; increase the annealing temperature may help.