



# CleanAmp™ Primers

The Next Generation in Hot Start PCR

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**TriLink**  
BioTechnologies

## Primers

### Novel Technology

CleanAmp™ Primers contain thermolabile chemical modifications that allow for primer-based Hot Start activation in PCR. These modifications prevent primer extension at the lower temperatures of PCR setup and manipulation. A Hot Start thermal activation step removes the modification and generates the corresponding unmodified primer, which supports amplification of the desired target. CleanAmp™ Primers specifically amplify your target by eliminating extension off of primer dimer (Figure 1A) and mis-priming (Figure 1B) events. Furthermore, CleanAmp™ Primers eliminate the need for Hot Start DNA polymerases because they are compatible with a number of standard DNA polymerases, such as Taq. (Figure 2)

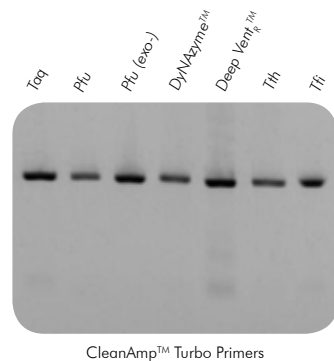


Figure 2: CleanAmp™ Primers are beneficial when used with a number of thermostable DNA polymerases. The use of CleanAmp™ Turbo Primers provides robust amplification of the desired amplicon with primer dimer formation reduced or eliminated.

### Versatile Applications

The different rates of release of CleanAmp™ Turbo and Precision Primer modifications can be exploited for improved results in downstream applications, such as multiplex PCR (Figure 3), reverse-transcription PCR, low copy number detection (Figure 4) and fast PCR. The performance of CleanAmp™ Primers can be applied to critical applications such as molecular diagnostics, forensics, detection of infectious agents and gene expression validation.

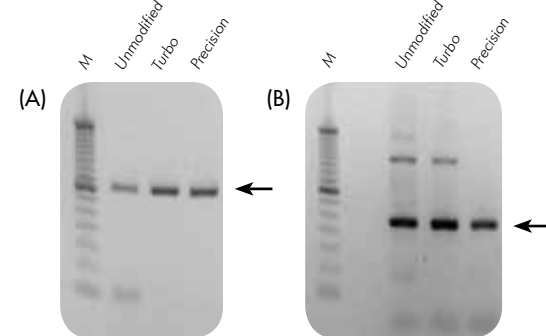


Figure 1: CleanAmp™ Primers improve PCR performance in systems prone to (A) primer dimer formation and (B) mis-priming. Both CleanAmp™ Turbo and Precision Primers improve the specificity of amplification, with Turbo Primers providing the greatest amplicon yield and Precision Primers providing the highest level of specificity.

### CleanAmp™ Amidites:

If you have oligonucleotide synthesis capabilities in-house, you may prefer making your own CleanAmp™ Primers. CleanAmp™ Amidites are available through our website, as well as through Glen Research at [www.glenres.com](http://www.glenres.com).

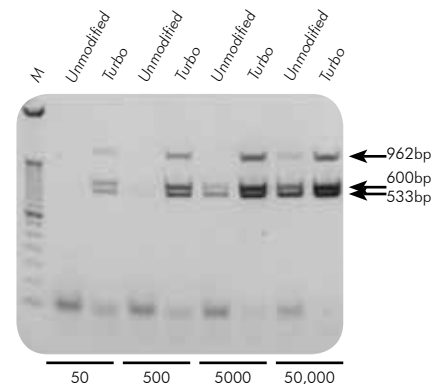


Figure 3: CleanAmp™ Turbo Primers improve the limit of detection in a multiplex PCR experiment where three distinct amplicons are formed with high specificity over a wide range of input template concentrations.

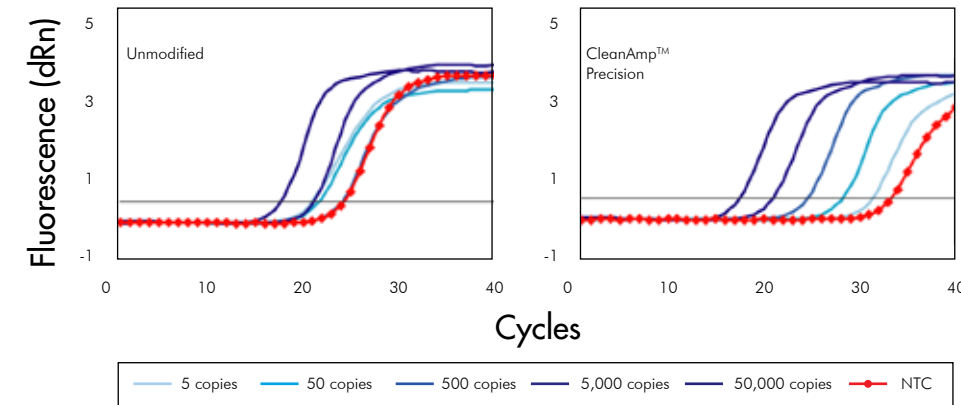


Figure 4: CleanAmp™ Precision Primers improve SYBR® Green I-based real-time PCR detection. Reactions containing CleanAmp™ Precision Primers greatly reduce the competing amplification of primer dimers, which compromise the limit of detection in amplifications with unmodified primers.

### Choose the Right Primer for You

CleanAmp™ Primers are available in two forms that differ in the rate of thermal activation. CleanAmp™ Turbo Primers activate more quickly than CleanAmp™ Precision Primers. The differential rate of activation of the two product types is beneficial for different applications and PCR needs:

#### CleanAmp™ Turbo Primers

- Fast cycling
- Multiplex PCR
- Improves amplicon yield
- Reduces mis-priming/primer dimer formation

#### CleanAmp™ Precision Primers

- Standard cycling
- One-step reverse-transcription PCR
- Improves specificity and limit of detection
- Greatest reduction in mis-priming/primer dimer formation

### Novel Primers with Signature TriLink Quality

TriLink has over 12 years of experience in making specialty modified oligonucleotides. Our strong quality commitment and our extensive experience with unique modifications results in the best primers possible. CleanAmp™ Primers are supplied cartridge purified. However, for those applications where PCR performance is of the utmost importance, we can RP-HPLC purify your CleanAmp™ Primers on a custom quote basis. Each primer undergoes quality control analysis by PAGE, MS and RP-HPLC to ensure high quality. These novel primers allow you to:

- Introduce CleanAmp™ Primer modifications into any standard DNA sequence, 15-40 bases in length.
- Depend on a guaranteed 10 OD yield from every synthesis.
- Receive primers in a high concentration stock solution.
- Scale-up to commercially viable amounts.
- License the technology at reasonable rates.

### Contact Us to Discuss Your Project Today!

CleanAmp™ Primers:  
\$250/pair

Order Online:  
[www.trilinkbiotech.com/cleanamp](http://www.trilinkbiotech.com/cleanamp)



TriLink BioTechnologies is an industry leader in manufacturing high quality oligonucleotides and nucleoside triphosphates at small and mid-scales.

TriLink operates a GMP laboratory with a QSR environment and provides:

- Milligram to multi-gram synthesis
- Highly-modified oligonucleotides and nucleosides
- Custom chemistry
- Contract research services
- Radiolabeling services
- Industry-leading technical support

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