SeqPrimer

Detect Single Base Variants With DNA Sequencing.

Primer quality matters in sequencing

Primer quality is one crucial factor for outstanding and interpretable sequencing results.

Standard PCR vs. cycle sequencing

Standard end-point PCR is an exponential process. The primer quality is not crucial for amplification, when checking PCR products on an agarose gel.

! JUST BECAUSE YOUR PRIMERS WORK IN PCR DOES NOT MEAN THEY PROVIDE GOOD SEQUENCING RESULTS!

In contrast, cycle sequencing reactions require a much higher level of primer quality independent of template type.

PCR primers also require a much higher quality when the same primers are used to sequence PCR products.

Sequencing PCR products

When primers with truncated products are initially used in the PCR reaction, wrong amplicons are generated.

These unwanted PCR products create a second sequence during cycle sequencing that lead to non-interpretable mixed sequences (see Fig.1).

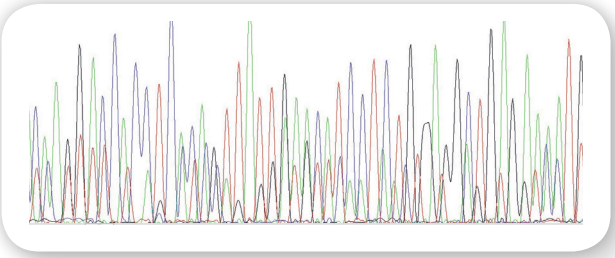

Fig.1 Mixed sequence as a result of multiple PCR products during cycle sequencing.

Get Outstanding Sequence Data.

Accurate base interpretation

Mutations are commonly identified by PCR followed by direct sequencing of the PCR product.

Optimum primer quality ensures accurate sequencing data

The quality of the sequencing primer is even more critical when you want to detect or verify single base variants.

With our validated SeqPrimer, you have the optimum primer for accurate base detection (see Fig.2).

The SeqPrimer is based on a set of analytical quality criteria that were verified by thousands of sequencing reactions.

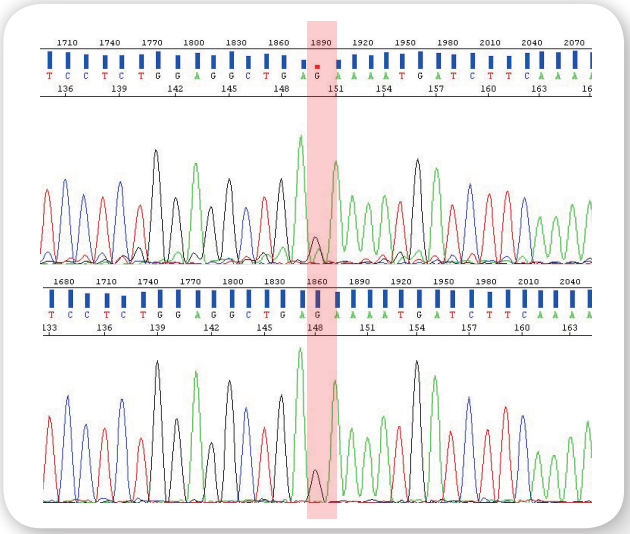

Fig.2 Two different sequencing trace files of the same PCR product using the SeqPrimer (bottom) and a primer of other quality (top).

SeqPrimer – What You Can Expect.

Optimised and verified results

The SeqPrimer was developed in close cooperation with our experienced oligo synthesis and DNA sequencing team.

Reproducible high sequence quality

- Accurate base detection & sequence interpretation
- Average quality trace scores of >56
- >99.999% sequence accuracy
- Zero background sequences

Optimised & verified SeqPrimer criteria

- Guaranteed yields of 5 nmol – sufficient for 200 reactions
- SeqPrimer purity of 90 % – defined by UPLC*
- Unique quality criteria – ensured by MALDI-TOF MS
- QC documentation with MALDI specs – online free of charge

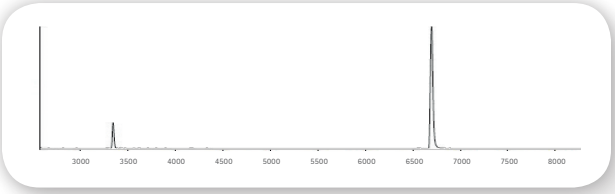

Fig.3 MALDI analysis of a SeqPrimer.

Flexible delivery formats and fast TAT

- Tubes: Full yield lyophilised or liquid in selected concentration
- 96well plates: Normalised to selected concentration in water
- Production in tube format in less than 1 working day
- Production of up to 5 plates in 3-4 working days

*UPLC: Ultra Performance Liquid Chromatography

Every Base Counts.

Discover the SeqPrimer

The SeqPrimer is highly recommended for any kind of DNA sequencing requirement but especially for sequencing PCR products.

PCR and subsequent sequencing of the PCR products ✔
Verification of mutagenesis experiments (SDM) ✔
Heterozygote detection & SNP-analysis by sequencing ✔
Re-sequencing by Sanger ✔
PCR sequencing from mitochondrial DNA (mtDNA) ✔
Genotyping by Sanger sequencing ✔
Identification of small insertions or deletions ✔
Detection of genetic rearrangements and variants ✔
***De novo* & BAC end sequencing** ✔
Checking clone constructs ✔

ISO 9001 CERTIFIED

ISO 13485 CERTIFIED