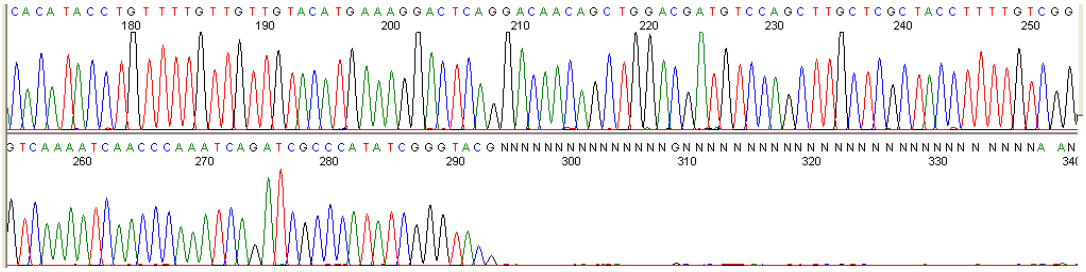
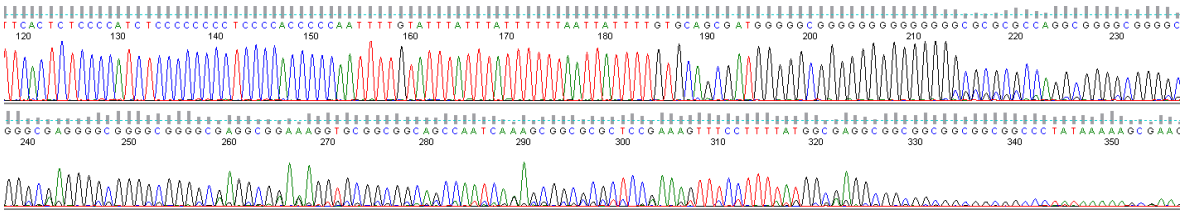
GENEWIZ Solutions Guide: DNA Sequencing
Early Termination Results

The following Examples, Possible Causes, and Solutions guidelines will help obtain your best DNA sequencing results. Please email or call GENEWIZ Technical Support for further diagnosis or assistance at dnaseq@genewiz.com or 1-877-436-3949 option 2.



Example 1: An abrupt stop before the end of the sequence run is reached.



Example 2: A poly G or poly C stretch can also cause the sample to terminate early. In this case, the poly G causes the signal to drop and eventually trail off.

Possible Causes:

- Hairpin/RNAi/shRNA - hairpins can sometimes form at the exon / intron boundaries as part of the splicing mechanism for mRNA maturation
- GC-rich region - due to inefficient strand melting
- Repetitive region

Solutions:

1. GENEWIZ's proprietary protocol is unparalleled for sequencing through these difficult templates. If you know you have a difficult template, simply choose "difficult template, hairpin, RNAi, or GC-rich" from the Special Request column when placing your order. There is an additional charge for this service.
2. For samples that unexpectedly terminate early, GENEWIZ can repeat for half-price using our proprietary protocol. Just choose "Half Price with Alt. Protocol" from the Repeat column dropdown menu located on the Order Results page.
3. Try sequencing with a primer that is further upstream or downstream of the current primer location, or try sequencing from the other direction. Sometimes changing the primer location can help sequence through a difficult region if the secondary structure is relatively weak.
4. For a repetitive region that leads to early termination, the only option is to try sequencing with a primer from the other direction. The GENEWIZ alternative protocol will not help in this case, because the failure is not caused by a secondary structure, but is due to the repetitive nature of the sequence that the enzyme cannot faithfully reproduce.