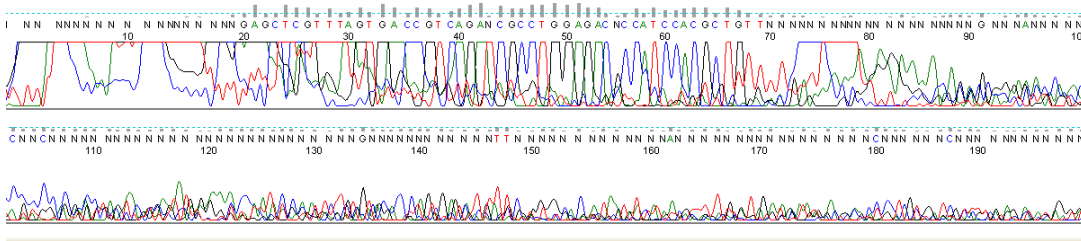
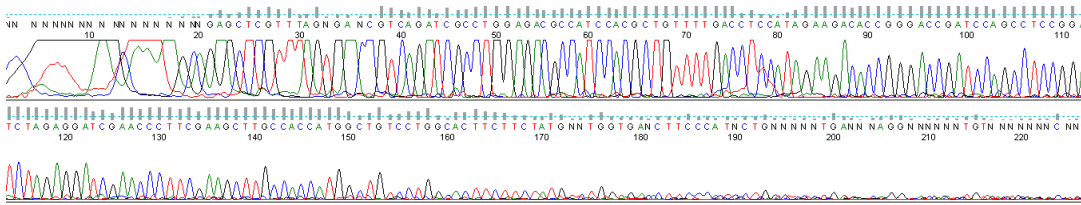


# GENEWIZ Solutions Guide: DNA Sequencing Poor Quality Results

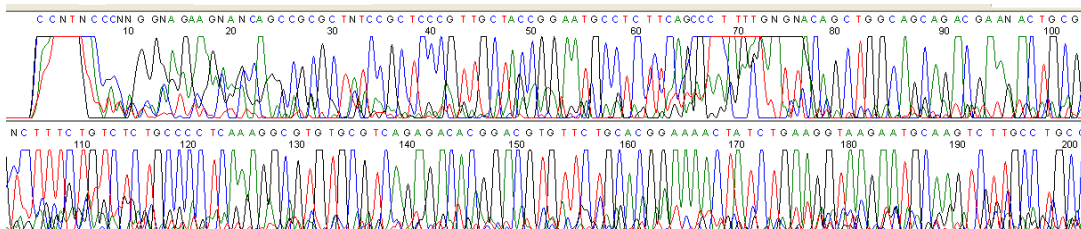
The following Examples, Possible Causes, and Solutions guidelines will help obtain your best DNA sequencing results. Please email or call GENEWIZ Technical Support for further diagnosis or assistance at [dnaseq@genewiz.com](mailto:dnaseq@genewiz.com) or 1-877-436-3949 option 2.



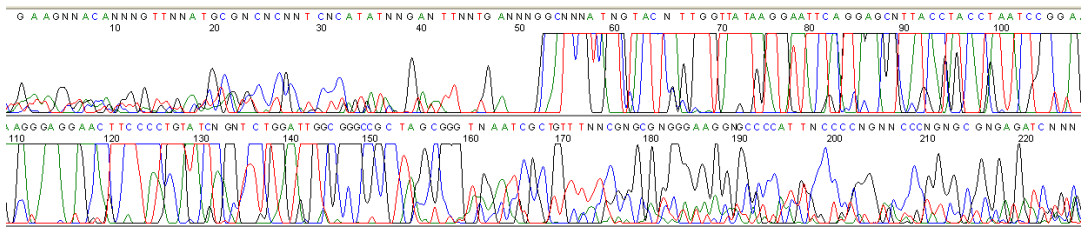
**Example 1:** The primer looks like it is binding, but the reaction quickly trails off and there is a high background signal.



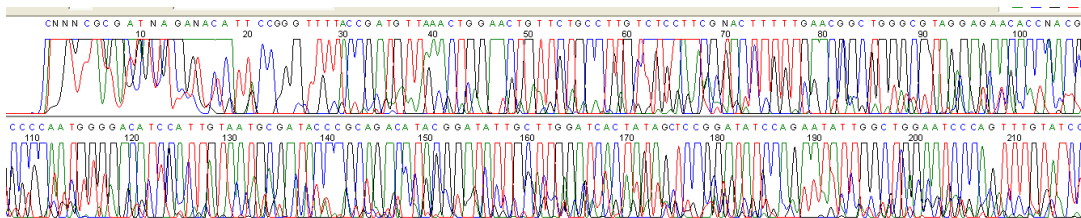
**Example 2:** The primer binds and the sequencing reaction starts, but it quickly trails off.



**Example 3:** Stable signal intensity level, but too close to the background signal.



**Example 4:** This chromatogram shows a reaction that is trying to work, but it is not able to provide any useful data.



**Example 5:** Contaminating background signal can lead to a poor quality read.

**Possible Causes:**

- Suboptimal DNA/primer ratio
- Inefficient binding of the primer
- Quality of the DNA - Contains contaminants like phenol, chloroform, EDTA, ethanol, isopropanol, salts, etc.

**Solutions:**

1. Double check that the DNA and primer concentrations are in the correct range (<http://www.genewiz.com/PrepareSample.aspx>).
2. Try a different primer or re-design your primer if the primer consistently gives you poor quality results.
3. If your 260/230 ratio is higher or lower than 1.8-2.0 you may have a contaminant in your sample (phenol, chloroform, EDTA, ethanol, isopropanol, salt, etc.) and will need to further purify the DNA before sequencing.
  - We recommend eluting your DNA in dH<sub>2</sub>O and avoiding TE and EB buffers; especially for mini-preps. This removes the confounding problem of salt and EtOH contamination carry over from the purification process. For larger preparations, diluting the stock solution in water (not TE or EB buffer) is strongly recommended. NB: EDTA will inhibit part of the sequencing reaction; little or no EDTA should be present in your sample.