Harness the power of our Progressive (ProGx) NGS Panels

Our custom diagnostic panels allow you to continue to utilize multi-gene panel testing, while also experiencing the benefits of continuously evolving methodologies.

ProGx panels are best suited for physicians who:

• Have a patient with an unidentified or heterogeneous phenotype, where whole exome sequencing has already been attempted or was not available
• Have a patient with an identified phenotype, but prefer to test a large number of genes related to the specified clinical indications
• Would like to expand on the fixed content panels currently offered through LifeLabs or any other provider of genetic testing
• Would like the ability to reflex to a larger data set if their choice in panel comes back negative

Key features include:

• Run on the backbone of whole genome sequencing, allowing for increased coverage of the genic regions, including exons, introns, and intergenic regions
• Reduced PCR bias to minimize artifacts
• Higher accuracy of detecting CNVs and complex gene rearrangements
• Shortened diagnostic odyssey by eliminating the additional costs and time delays of step-wise analyses
• Mitochondrial analyses, when applicable
• Reflex to whole genome sequencing available

**Test Methodology**

<table>
<thead>
<tr>
<th>Coverage*</th>
<th>&gt;99% of targeted bases covered at minimum 10x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genes Covered</td>
<td>Fixed content or custom gene panels available</td>
</tr>
<tr>
<td>Genomic Regions Covered</td>
<td>All genomic regions, including promoters, introns, and untranslated regions</td>
</tr>
<tr>
<td>Read Depth</td>
<td>30x average read depth</td>
</tr>
<tr>
<td>Turn-Around Time</td>
<td>4-6 weeks</td>
</tr>
<tr>
<td>Deletion/Duplication</td>
<td>Included via WGS-based analysis</td>
</tr>
<tr>
<td>Mitochondrial Genome</td>
<td>Included upon request, via NGS-based analysis</td>
</tr>
<tr>
<td>Repeat Expansion Testing</td>
<td>Available as an add-on</td>
</tr>
<tr>
<td>Prenatal Testing</td>
<td>Available on request</td>
</tr>
<tr>
<td>Available as Singleton (solo) or Trio</td>
<td>Singleton only</td>
</tr>
<tr>
<td>Reflex to Larger Data</td>
<td>Reflex to Whole Genome Sequencing available at additional cost</td>
</tr>
<tr>
<td>Availability of Research Report</td>
<td>Available only after reflex to larger data set</td>
</tr>
<tr>
<td>Availability of Raw Data</td>
<td>Available only after reflex to larger data set</td>
</tr>
</tbody>
</table>

*Genome sequencing may not cover 100% of all bases in the human genome due to various technical reasons. These missing regions are not backfilled by Sanger, however, we will provide coverage statistics for targeted genes. Current as of May 2018. As technology improves and is clinically validated, so does our methodology. Please contact us for more details.

Visit www.lifelabsgenetics.com to learn more about custom diagnostic panels.
Contact us Ask.Genetics@LifeLabs.com | 1-844-GENEHELP (1-844-363-4357)
Use the LifeLabsGenetics.com search tool to identify the panel(s) that best represents the patient’s clinical indications.

Provide the names of these panels to your territory manager to receive your reference number.

This reference number can be used repeatedly for other patients displaying similar clinical indications.

The Ordering Checklist on page 1 can be used to ensure you’ve completed all the necessary pages of the requisition.

In the ProGx Panels section on page 2 of the requisition form:

- Select if you would like an automatic reflex to whole genome sequencing if the results of the panel are negative. Please note that additional charges may apply.
- Write the reference number provided to you by your territory manager.
- If you have selected the automatic reflex option:
  - You may also select to receive a Research Report, which includes potential disease-causing variants in candidate genes for which there is not yet sufficient published evidence.
  - You may also select to receive the raw data, in one of three potential formats.

Only page 1 of the Informed Consent is required to be signed.

We recommend also completing the second page of the consent form, in the event that a reflex to whole genome sequencing will be required.

For all testing, we strongly encourage you to provide the patient’s in-depth medical history to ensure the most comprehensive analysis and interpretation of the genetic testing results. This can be done through any of the following three ways:

- Writing in the Relevant Medical and Family History section on page 1
- Completing the checkboxes on page 5
- Providing the patient’s hospital charts.