Features

Hybridisation-based enrichment delivering unparalleled coverage uniformity
• Detect low frequency melanoma variants consistently with confidence

Pre-optimised panels that meet your technical requirements and work with your samples
• No more lengthy in-house optimisation, decreasing assay development time

Bespoke panel content
• Sequence only what’s relevant for your cancer research, increase throughput and save on sequencing reagents

Panel content designed with experts and from current literature to target all relevant regions including intronic and splice sites
• Get the most comprehensive insight into disease-driving mutations

NGS custom Colorectal cancer panel
**Introduction**

Colorectal cancer (CRC) is the third most common cancer in men (746,000 cases, 10.0% of the total) and the second in women (614,000 cases, 9.2% of the total) worldwide. Next generation sequencing (NGS) has enabled the simultaneous study of mutations in high-penetrance colorectal cancer genes. These include KRAS, APC and TP53 as well as more moderate-risk genes such as ERBB2, PTEN and BRAF.

Choose your ideal colorectal cancer NGS panel from our range of fully tested and optimised NGS panel content. Simply mix and match the genes or individual exons you require to get the most out of your sequencing runs. Use in conjunction with the SureSeq™ FFPE DNA Repair Mix for improved NGS library yields, %OTR and mean target coverage from challenging FFPE derived samples.

**Superior Coverage Uniformity**

KRAS mutations are found in approximately 35–45% of colorectal cancers with around 80% occurring in codon 12 and 15% in codon 13 of exon 2; other commonly reported mutations are found in exons 3 and 4. The tumor suppressor gene APC plays an important role in CRC development. Absence of the APC protein leads to accumulation of betacatenin in the cytoplasm, which may contribute to tumour progression. 60% of all somatic mutations in APC occur within the mutation cluster region between codons 1286 and 1513 on exon 15. Figures 1 and 2 illustrate the superior uniformity of coverage of these key genomic regions.

![Figure 1: KRAS coverage of A exon 2, B exon 3 and C exon 4.](image)
Approximately 8–15% of colorectal cancers involve mutations in the BRAF gene, with up to 90% of these a result of a mutation at V600E, located on exon 15. In TP53, another frequently mutated cancer gene, point mutations are predominantly located in exons 5–8, however sequencing is often hampered by the GC-rich content, which can lead to technical challenges in assay design and analysis. OGT’s innovative bait design overcomes this issue, offering a high level of uniform coverage for these difficult genes to sequence in FFPE samples (Figure 3 and 4).
NGS custom Colorectal cancer panel

Select from any of the following myPanel colorectal cancer whole gene or exonic content below

- APC
- BRAF
- CDH1
- CHEK2
- CTNNA1
- ERBB2
- HRAS
- KRAS
- MET
- MSH6
- NRAS
- PIK3CA
- PTEN
- SMAD4
- STK11
- TP53

Getting started with your next SureSeq myPanel™ NGS Custom Cancer Panel could not be simpler

SELECT
Select the gene/exon/intron content you need from OGT’s regularly updated, expert curated content library

CHANGE
New discoveries in cancer biology drive a change in your cancer workflow

PREPARE
OGT prepares a fully pre-optimised cancer panel to your specification

EXPERIENCE
You experience the superior performance of a SureSeq NGS Custom Cancer Panel

VALIDATE
You validate the performance of the panel in your laboratory workflow

APPROVE
Following approval, OGT ships the final panel to you

SureSeq myPanel
It really is this quick and easy...

Talk to us about your custom melanoma NGS panel requirements and let our expertise work in helping you to advance your cancer research
## Ordering information

UK +44 (0) 1865 856800  
US +1 914 467 5285  
contact@ogt.com  
ogt.com

<table>
<thead>
<tr>
<th>Product</th>
<th>Contents</th>
<th>Cat. No.</th>
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<tbody>
<tr>
<td>SureSeq myPanel NGS Custom Colorectal Cancer Panel</td>
<td>Enrichment baits; Interpret Software</td>
<td>Various</td>
</tr>
<tr>
<td>SureSeq FFPE DNA Repair Mix*</td>
<td>Enzyme, mix and buffers sufficient for 16 FFPE DNA samples</td>
<td>500079</td>
</tr>
<tr>
<td>SureSeq NGS Library Preparation Complete Solution (16)</td>
<td>Bundle of 1x SureSeq NGS Library Preparation Kit (16), containing adapters, PCR primers and enzymes, 1x SureSeq NGS Index Kit – Collection A, 1x SureSeq NGS Hyb &amp; Wash Kit (16), 1x Dynabeads M270 Streptavidin (2ml) and 1x AMPure XP beads (10ml). Sufficient for 16 samples</td>
<td>500084</td>
</tr>
<tr>
<td>SureSeq NGS Library Preparation Complete Solution (48)</td>
<td>Bundle of 1x SureSeq NGS Library Preparation Kit (48), containing adapters, PCR primers and enzymes, 1x SureSeq NGS Index Kit – Collection B, 3x SureSeq NGS Hyb &amp; Wash Kit (16), 3x Dynabeads M270 Streptavidin (2ml) and 3x AMPure XP beads (10ml). Sufficient for 48 samples</td>
<td>500085</td>
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## References

1. [http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx](http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx)  
5. [https://www.my cancergenome.org/content/disease/colorectal-cancer/braf/54/](https://www.my cancergenome.org/content/disease/colorectal-cancer/braf/54/)

*The SureSeq FFPE DNA Repair Mix can only be purchased in conjunction with SureSeq NGS panels, not as a standalone product.*