

# CleanPlex® SARS-CoV-2 FLEX Research and Surveillance Panel

## Added Flexibility to SARS-CoV-2 Sequencing

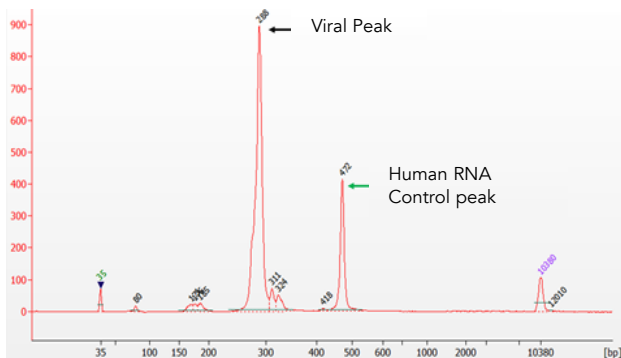
### Improved Performance

- In Process Controls**  
 Human RNA primers are included as library preparation controls for more confident negative calls.
- Improved Coverage**  
 Optimized amplification of specific regions in the genome for more even coverage even at low input amount.
- Degenerate Primers**  
 Strategically designed for consistent coverage to withstand mutations over time.
- Increase Sample Multiplexing**  
 Added unique dual index (UDIs) option allows sequencing up to 3,072 samples simultaneously.

The CleanPlex SARS-CoV-2 FLEX panel contains an updated workflow and design for improved performance and confident variant calling even if the virus mutates with time. The panel is built upon the original CleanPlex SARS-CoV-2 Research and Surveillance panel to provide added benefits of more consistent coverage and added in process control.

### In Process Control

Based on feedback from our customers, the FLEX panel also includes a pair of Human RNA Primer controls for more confident negative sample calling by providing an internal library preparation success control, specifically when viral copies are not present or in extremely low counts. The single primer pair targets the TATA Binding protein (TBP) human housekeeping gene. This control amplicon visualizes at ~470bp separate from the library (~280 bp) and allows visual confirmation of sample quality and library preparation - especially for negative samples.



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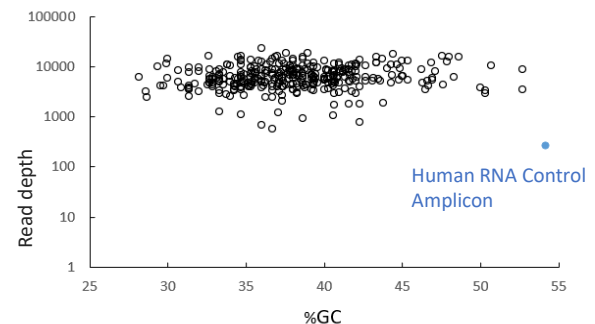
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### Coverage

Specific regions of the viral genome were optimized for better coverage in the FLEX panel. With the adjustment, the panel has an improved 0.2X mean uniformity from 94% to 97%. The uniformity plot below shows each of the 343 and 1 control amplicons plotted by its GC% content and read depth, showing uniform amplification.



### Degenerate Primers Design

Thousands of sequences were referenced to form a collective view of the viral genome. Using this information, the team strategically designed a set of degenerate primers as a preemptive effort to maintain the robust performance already seen with the original SARS-CoV-2 panel. The FLEX panel gives the added confidence for mutation detection and genome coverage even as the virus mutates over time.

### Increase Sample Multiplexing

With the added unique dual index option, each flow cell lane can multiplex up to 384 samples at once. With the multiple flow cell capability on a NovaSeq™ 6000, one can sequence up to 3,072 samples simultaneously for faster turn around and higher throughput workflows.

### Ordering Information

The original SARS-CoV-2 Panel is still available, along with the FLEX panel. For indexing options and additional product configurations, please visit [www.paragongenomics.com/store/](http://www.paragongenomics.com/store/)

Product	SKU
CleanPlex SARS-CoV-2 FLEX Panel (8 reactions)	918013
CleanPlex SARS-CoV-2 FLEX Panel (96 reactions)	918014
CleanPlex SARS-CoV-2 FLEX Panel (384 reactions)	918015

### Learn More

Details about original CleanPlex SARS-CoV-2 Panel

<https://www.paragongenomics.com/product/cleanplex-sars-cov-2-panel/>

