

xGen™ Respiratory Virus Amplicon Panel

The xGen Respiratory Virus Amplicon Panel includes a premixed target-specific multiplex primer pool designed to amplify RSV A, RSV B, Influenza A H1N1, Influenza A H3N2, Influenza B, and SARS-CoV-2 genetic material.

To construct next generation sequencing (NGS) libraries for the Illumina® sequencing platform, this panel must be purchased with the xGen Amplicon Core Kit and indexing primers of choice. For more information, see the [xGen Respiratory Virus Amplicon Panel webpage](#).

| Features | Specification |
|-------------------------|--|
| Panel information | Primers designed to target RSV A, RSV B, Influenza A H1N1, Influenza A H3N2, Influenza B, SARS-CoV-2 |
| Input material | 1st or 2nd strand cDNA Minimum of 10–100 viral copies |
| Multiplexing capability | Up to 1536 UDIs |
| Recommended read depth | 200,000 reads per library, PE150 |
| Time required | ~2.5 hours |
| Number of amplicons | 1199 |

Protocol modifications

Please use the [xGen Amplicon Panels for viral genome sequencing Protocol](#) for the full description of the procedures with the following modifications:

Table 1. Multiplex PCR (PCR 1)*

| Temperature (°C) | Time | Number of cycles |
|------------------|--------|------------------|
| 98 | 30 sec | 1 |
| 98 | 10 sec | |
| 61 | 5 min | 4 |
| 65 | 1 min | |
| 98 | 10 sec | 20 |
| 64 | 1 min | |
| 65 | 1 min | 1 |
| 4 | ∞ | |

* Confirm lid heating is turned ON and is set to 105°C.
Allow the block to reach 98°C before loading samples.

Table 2. Indexing PCR (PCR 2)*

| Temperature (°C) | Time | Number of cycles |
|------------------|--------|------------------|
| 37 | 20 min | 1 |
| 98 | 30 sec | 1 |
| 98 | 10 sec | |
| 60 | 30 sec | 5 |
| 66 | 1 min | |
| 4 | ∞ | |

* Confirm lid heating is turned ON and is set to 105°C.
Allow the block to reach 37°C before loading samples.

If samples contain a low number of viral copies, see Appendix C: Low Viral Load Recommendations in the [xGen Amplicon Panels for viral genome sequencing Protocol](#) to adjust PCR cycles and increase library yield.

! **Important:** Multiplex PCR reactions must be assembled on ice and then placed in a pre-heated thermal cycler. Failure to do so will reduce yields and performance.

For more information, go to www.idtdna.com/ContactUs

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