

# Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay

Catalog Numbers A51305 and A51306

Pub. No. MAN0024917 Rev. C.0

**Note:** See the *Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay User Guide* (Pub. No. MAN0024915) for instructions for using the Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel.

## Product description

The Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel is a comprehensive next-generation sequencing (NGS) assay to enable research and surveillance of the SARS-CoV-2 virus, which causes COVID-19, through complete genome sequencing. The panel design includes the addition of new variant-tolerant primers to broaden and improve the coverage for variants of concern and increase the sensitivity of the panel to enable detection from lower viral titer samples.

Two versions of the panel are available: the Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay – GS Manual (Cat. No. [A51305](#)) for manual library preparation and Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay – GS Chef Ready (Cat. No. [A51306](#)) for automated library preparation on the Ion Torrent™ Ion Chef™ System.

The kit includes the following key features:

- Provides >99% coverage of the SARS-CoV-2 viral genome and variants, including all known serotypes.
- Complete genome sequencing from as low as 50 viral copies and obtain virus sequence from as low as 5 viral copies.

## Software compatibility

The Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel is compatible with Torrent Suite™ Software 5.12 and later. We recommend updating your Torrent Server, Ion Chef™, and Ion sequencer instrument software to the latest available versions before using this kit.

## Contents and Storage

### Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay – GS Manual

Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay – GS Manual (Cat. No. [A51305](#)) is used to prepare barcoded sample libraries from RNA. The Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel and the Ion AmpliSeq™ Library Kit Plus are provided.

The Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel consists of two 5X primer pools that target 237 amplicons specific to the SARS-CoV-2 (the virus that causes COVID-19) and 5 human controls. With an amplicon length range of 125–275 bp, the panel provides > 99% coverage of the SARS-CoV-2 genome (~30 kb), and covers all known serotypes.

Contents	Amount	Storage
<b>Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel</b>		
5X SARS-CoV-2 Insight Panel - Pool 1 (green cap)	96 reactions	–30°C to –10°C
5X SARS-CoV-2 Insight Panel - Pool 2 (grey cap)		

Contents	Amount	Storage
<b>Ion AmpliSeq™ Library Kit Plus<sup>[1]</sup> (96 reactions)</b>		
5X Ion AmpliSeq™ HiFi Mix (red cap)	480 µL	–30°C to –10°C
FuPa Reagent (brown cap)	192 µL	
Switch Solution (yellow cap)	384 µL	
DNA Ligase (blue cap)	192 µL	
25X Library Amp Primers (pink cap)	192 µL	
1X Library Amp Mix (black cap)	4 × 1.2 mL	15°C to 30°C <sup>[2]</sup>
Low TE	2 × 6 mL	

<sup>[1]</sup> Available separately (Cat. No. [A35907](#))

<sup>[2]</sup> Can be stored at –30°C to –10°C for convenience.

## Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay – GS Chef Ready

The Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay – GS Chef Ready (Cat. No. [A51306](#)) is used to prepare barcoded sample libraries from RNA. The kit consists of the Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel and the Ion AmpliSeq™ Kit for Chef DL8.

The Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel consists of two 2X primer pools that target 237 amplicons specific to the SARS-CoV-2 (the virus that causes COVID-19) and 5 human controls. With an amplicon length range of 125–275 bp, the panel provides > 99% coverage of the SARS-CoV-2 genome (~30 kb), and covers all known serotypes.

Component	Amount	Storage
Ion AmpliSeq™ SARS-CoV-2 Insight Research Assay – GS Chef Ready		
2X SARS-CoV-2 Insight Panel - Pool 1	32 reactions	–30°C to –10°C
2X SARS-CoV-2 Insight Panel - Pool 2		
Ion AmpliSeq™ Kit for Chef DL8 <sup>[1]</sup> (32 reactions)		
Ion AmpliSeq™ Kit for Chef DL8 (Part No. A29025)	4 cartridges	–30°C to –10°C
Ion AmpliSeq™ Chef Solutions DL8 (Part No. A29026)	4 cartridges	2°C to 8°C <sup>[2]</sup>
Ion AmpliSeq™ Chef Supplies DL8 (per insert) (Part No. A29027) <ul style="list-style-type: none"><li>Ion AmpliSeq™ Tip Cartridge L8</li><li>PCR Plate Frame</li><li>PCR Frame Seal</li><li>Enrichment Cartridge</li></ul>	1 box with 4 inserts	15°C to 30°C
IonCode™ 0101–0132 in 96 Well PCR Plates (dried) (Part No. A29028) Set includes 4 PCR plates: <ul style="list-style-type: none"><li>IonCode™ 0101–0108 in 96 Well PCR Plate (red)</li><li>IonCode™ 0109–0116 in 96 Well PCR Plate (yellow)</li><li>IonCode™ 0117–0124 in 96 Well PCR Plate (green)</li><li>IonCode™ 0125–0132 in 96 Well PCR Plate (blue)</li></ul>	1 set of 4 plates	15°C to 30°C

<sup>[1]</sup> Also available separately (Cat. No. [A29024](#))

<sup>[2]</sup> Ion AmpliSeq™ Chef Solutions DL8 cartridges are shipped at ambient temperature, but must be stored at 2°C to 8°C on arrival.

## Limited product warranty

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Revision history: Pub. No. MAN0024917C.0

Revision	Date	Description
C.0	18 September 2023	Updated the Ion AmpliSeq™ Chef Supplies DL8 (Part No. A29027) to include the PCR Plate Frame.
B.0	11 June 2021	Updated product name.
A.0	26 May 2021	New document for the Ion AmpliSeq™ SARS-CoV-2 Insight Research Panel.

The information in this guide is subject to change without notice.

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