

A 3D rendering of a coronavirus particle, showing its characteristic spherical shape and numerous spike proteins extending from its surface. The particle is rendered with a green-to-blue gradient, giving it a glowing, ethereal appearance. The background is dark blue, and the overall image has a scientific, medical feel.

AusDiagnostics

Respiratory Infections

TandemPlex®

TandemPlex® panels feature multiplex tandem PCR, or MT-PCR, a multiplexed molecular method that provides the added capability to detect viruses, bacteria, protozoa and yeasts in one go, bringing great benefits for differential diagnosis. This is important in an era of syndromic diagnosis when patients often present with symptoms that are analogous in viral and bacterial infections. Having the ability to detect and differentiate between multiple pathogens is critical for deciding medical interventions for best patient outcomes.

Multiplexed molecular methods are becoming the gold standard for the detection of respiratory pathogens due to their superior sensitivity, rapid turnaround time, simplicity, and ability to identify multiple pathogens, some of which are slow growing or difficult to culture.

Benefits of TandemPlex® panels

- Detect up to 40 targets with a single panel
- High specificity for reliable results
- Separated 2-step process that allows parallel processing for greater efficiency
- Low amount of sample required so you can retain some for further analysis
- Low number of multiplexed amplification cycles which limits competition and preserves relative quantitation

Respiratory Infections TandemPlex® Panels

SARS-CoV-2, Influenza and RSV

Multiple target assays for SARS-CoV-2 and influenza detection and differentiation.

SARS-CoV-2, Influenza & RSV 8-well SARS-CoV-2, Influenza & RSV 8-well Universal REF 20081 / 80081 (Universal)



SARS-CoV-2 (2 assays - ORF1, ORF8)
Influenza A
Influenza A typing H1/H3
Influenza B
Respiratory Syncytial Virus A & B

SARS-CoV-2 Typing 16-well REF 20082



SARS-CoV-2	Mutations	
SARS-CoV-2 (ORF1)	SARS N501Y	SARS E484K
SARS-CoV-2 (ORF8)	SARS H69/V70 deletion	SARS E484Q
SARS-CoV-2 (ORF6)	SARS K417N	SARS P681R
	SARS K417T	SARS P681H

Comprehensive

The widest panel for the detection of a broad range of common pathogens that cause respiratory infection.

Respiratory Pathogens 24-well, Universal REF 80617



Viruses	Bacteria
Adenovirus groups B, C, E, some A, D	<i>Chlamydomphila psittaci</i>
Influenza A	<i>Chlamydomphila pneumoniae</i>
Influenza A typing H1/H3	<i>Bordetella spp. (IS481)</i>
Influenza B	<i>Bordetella pertussis</i>
Metapneumovirus	<i>Bordetella parapertussis (IS1001)</i>
Parainfluenza 1, 2, 3, 4	<i>Legionella pneumophila</i>
Respiratory Syncytial Virus A & B	<i>Legionella longbeachae</i>
Rhinovirus & Enterovirus	<i>Mycoplasma pneumoniae</i>
Enterovirus (excl. Rhino)	
SARS-CoV-2 (ORF1)	Fungi
SARS-CoV-2 (ORF8)	Pneumocystis jirovecii
Seasonal coronavirus	

Common

A balanced selection of common pathogens that cause respiratory infection.

Respiratory Viruses 16-well REF 20602

16
HP
24

Adenovirus groups B, C, E, some A, D	Parechovirus
Bocavirus	Respiratory Syncytial Virus A & B
Influenza A	Rhinovirus / Enterovirus
Influenza A typing H1/H3	Enterovirus
Influenza B	SARS-CoV-2 (ORF1)
Metapneumovirus	SARS-CoV-2 (ORF8)
Parainfluenza 1, 2, 3, 4	Seasonal Coronavirus

Respiratory Viruses 16-well REF 20620

16
HP
24

Viruses	Rhinovirus / Enterovirus
Adenovirus groups B, C, E, some A, D	Enterovirus
Influenza A	SARS-CoV-2 (ORF1)
Influenza B	SARS-CoV-2 (ORF8)
Metapneumovirus	
Parainfluenza 1, 2, 3, 4	
Parechovirus	
Respiratory Syncytial Virus A & B	
Bacteria	
	<i>Bordetella spp.</i>
	<i>Mycoplasma pneumoniae</i>

Respiratory Viruses B 16-well REF 20612

16
HP
24

Viruses	Bacteria
Adenovirus groups B, C, E, some A, D	<i>Bordetella spp.</i>
Influenza A	<i>Bordetella parapertussis</i>
Influenza B	<i>Legionella longbeachae</i>
Metapneumovirus	<i>Legionella pneumophila</i>
Parainfluenza 1, 2, 3, 4	<i>Mycoplasma pneumoniae</i>
Respiratory Syncytial Virus A & B	<i>Chlamydomphila pneumoniae</i>
Rhinovirus / Enterovirus	
SARS-CoV-2 (ORF1)	
SARS-CoV-2 (ORF8)	

Respiratory Viruses C 16-well REF 20613

16
HP
24

Viruses	SARS-CoV-2 (ORF1)
Adenovirus groups B, C, E, some A, D	SARS-CoV-2 (ORF8)
Influenza A	
Influenza A typing H1/H3	
Influenza B	
Metapneumovirus	
Parainfluenza 1, 2, 3, 4	
Respiratory Syncytial Virus A & B	
Rhinovirus / Enterovirus	
Bacteria	
	<i>Bordetella spp.</i>
	<i>Bordetella parapertussis</i>
	<i>Legionella longbeachae</i>
	<i>Legionella pneumophila</i>
	<i>Mycoplasma pneumoniae</i>

Essential

A leaner panel to focus on screening the most common respiratory pathogens.

Respiratory Pathogens 12-well, Universal REF 80618

12
HP
24
UP
96

Viruses	SARS-CoV-2 (ORF1)
Adenovirus groups B, C, E, some A, D	SARS-CoV-2 (ORF8)
Influenza A	
Influenza B	
Metapneumovirus	
Parainfluenza 1, 2, 3, 4	
Respiratory Syncytial Virus A & B	
Rhinovirus / Enterovirus	
Bacteria	
	<i>Bordetella spp.</i>

Pneumonia

Panels to detect a broad range of pathogens causing typical and atypical pneumonia.

Pneumonia 16-well REF 20631

16
HP
24

<i>Aspergillus fumigatus</i>	<i>Legionella pneumophila</i>
<i>Bordetella spp. (IS481)</i>	<i>Legionella longbeachae</i>
<i>Coxiella burnetii</i>	<i>Mycobacterium tuberculosis</i>
<i>Chlamydomphila pneumoniae</i>	complex
<i>Chlamydomphila psittaci</i>	<i>Mycoplasma pneumoniae</i>
<i>Cryptococcus neoformans</i>	<i>Pneumocystis jirovecii (PCP)</i>
<i>Haemophilus influenzae,</i>	<i>Staphylococcus aureus</i>
<i>Haemophilus parainfluenzae,</i>	<i>Streptococcus pneumoniae</i>
<i>Haemophilus haemolyticus</i>	

Atypical Pneumonia 8-well REF 20632

8
HP
24

<i>Chlamydomphila pneumoniae</i>	<i>Legionella longbeachae</i>
<i>Chlamydomphila psittaci</i>	<i>Legionella pneumophila</i>
<i>Cryptococcus neoformans</i>	<i>Mycoplasma pneumoniae</i>
	<i>Pneumocystis jirovecii (PCP)</i>

Sample Results

Presence of a target gene is represented by the fluorescence detected during the MT-PCR process.

These results (Figure 1) are also presented as MELT curves and gene targets detected in the sample are automatically called for clear diagnosis.

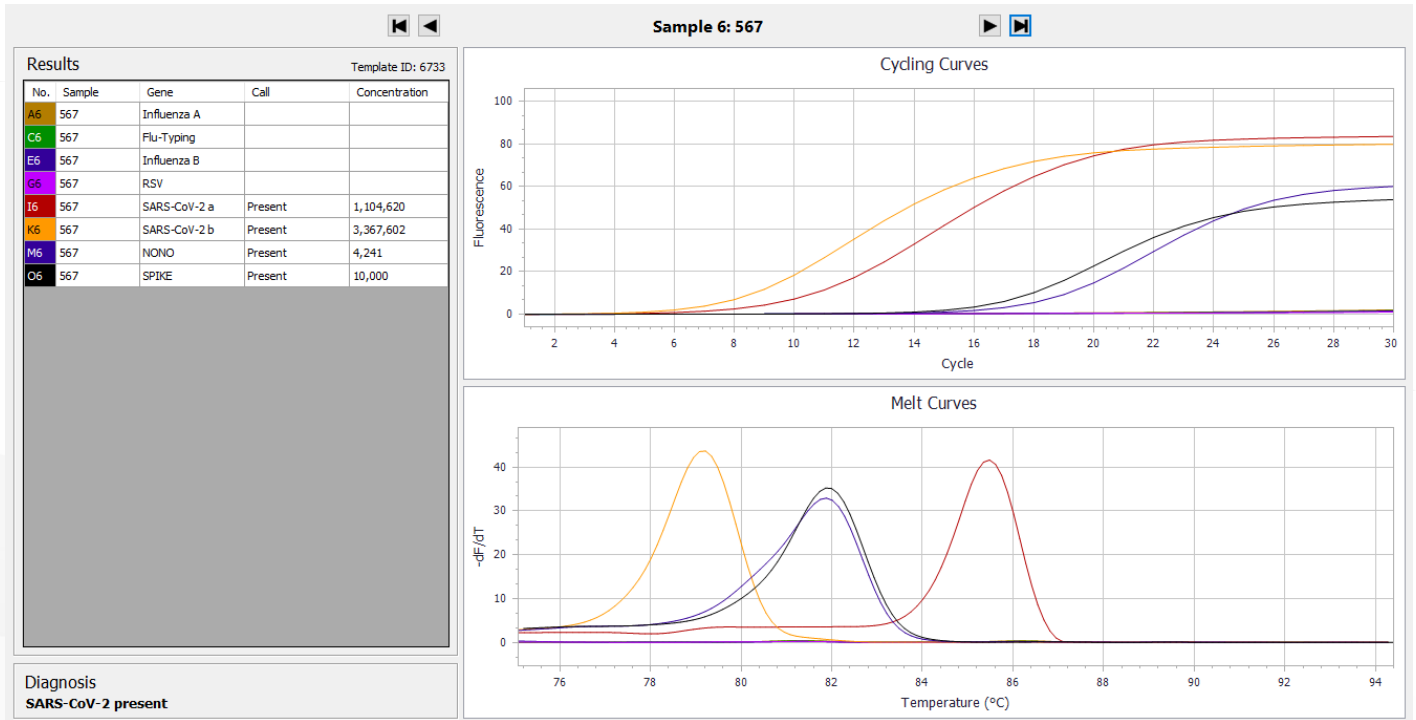


Figure 1: Sample results for SARS-CoV-2, Influenza & RSV 8-well panel (REF 20081)

- HP 24 TandemPlex® panel compatible with Highplex instrument
- UP 96 TandemPlex® panel compatible with Ultrplex 3 instrument
- 8 well 8-well TandemPlex® panel
- 12 well 12-well TandemPlex® panel
- 16 well 16-well TandemPlex® panel
- 24 well 24-well TandemPlex® panel

Automation

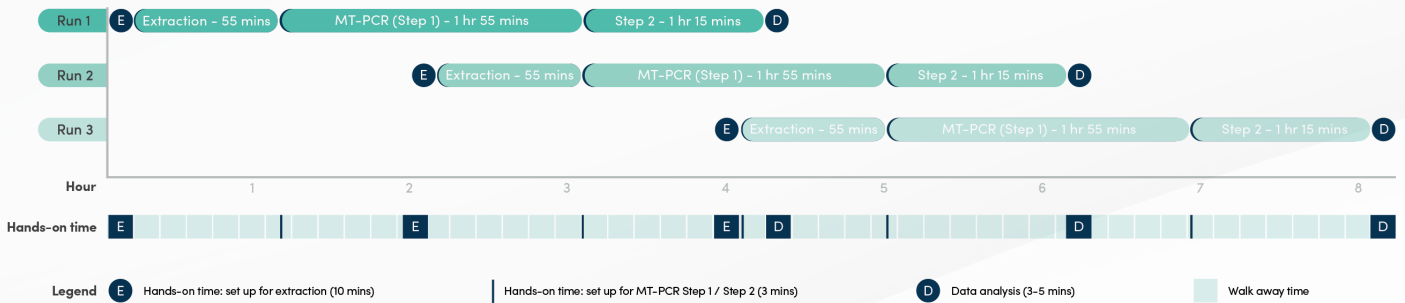
Diagnostic testing using TandemPlex® panels is effortless with automation solutions for any workflow, ranging from low and versatile throughput to high throughput and screening applications.

Highplex Alliance™

Low-medium throughput

MT-Prep™ 24 sample purification with Highplex MT-PCR processing

- Sample to results from up to 24 samples¹ in 4 hrs 30 mins
Extraction: 35 – 55 mins² | MT-PCR: 3 hrs 30 mins
- Quick and easy setup in less than 2 mins
- Ready-to-use reagents and key plastic consumables
- Small footprint – requires less than 2m of bench space
- UV deck sterilisation to prevent cross contamination
- Automatic results calling
- LIMS compatible



¹ 8-well, 12-well and 16-well TandemPlex® panels can run up to 24 samples; 24-well panels up to 16 samples.

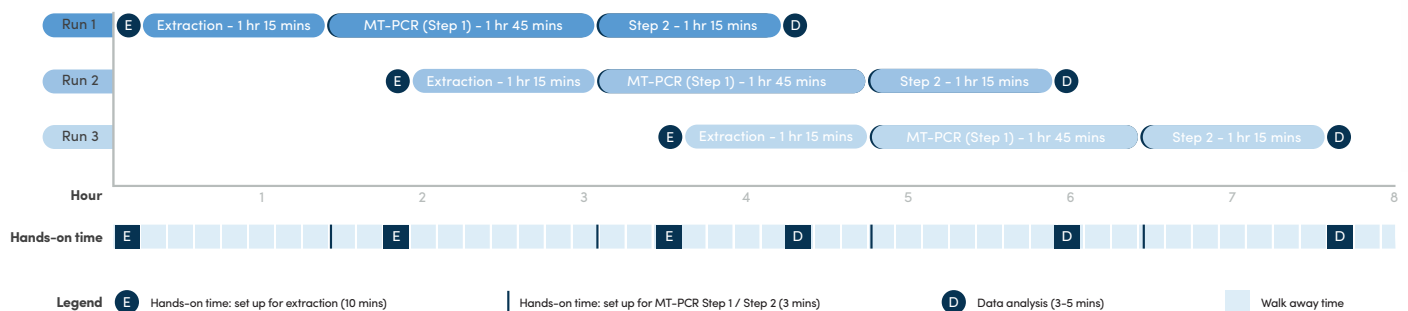
² using MT-Prep™ Viral/Pathogen Nucleic Acids Extraction Kit B. 35-minute rapid protocol, 55-minute standard protocol for up to 24 samples.

Ultrplex Alliance™

High throughput

MT-Prep™ XL sample purification with Ultrplex 3 MT-PCR processing

- Sample to results from up to 96 primary samples³ in 4 hrs 15 mins
Extraction: 1 hr 15 mins⁴ | MT-PCR: 3 hrs 30 mins
- Set up in as little as 2 mins
- Ready-to-use reagents and key plastic consumables
- Multi-channel pipetting for efficient processing
- Use with universal TandemPlex® panels
- Automatic results calling
- LIMS compatible



³ 8-well and 12-well TandemPlex® panels can run up to 96 samples; 24-well panels up to 48 samples.

⁴ Sample purification using Puryx® Comprehensive DNA/RNA Extraction kit.

Ordering information

Each TandemPlex® panel requires the following to run:

1. Step 1 Tubes (e.g. 81092S)
2. Step 2 Plates (e.g. 81092P)
3. Reagent Cassette for Highplex or Reagent Reservoir for Ultraplex instruments
4. Synthetic positive controls



[Learn more](#)

Key reagents

xxxxxS	Step 1 Tubes for the relevant panel	HP ₂₄	UP ₉₆
xxxxxP	Step 2 Plates for the relevant panel	HP ₂₄	UP ₉₆
40231	Low DNA Reagent Cassette ¹	HP ₂₄	
40241	Demi DNA Reagent Cassette ¹	HP ₂₄	
40331	Low RNA Reagent Cassette ¹	HP ₂₄	
40341	Demi RNA Reagent Cassette ¹	HP ₂₄	
40421	Medium DNA Reagent Reservoir ²	UP ₉₆	
40431	Low DNA Reagent Reservoir ²	UP ₉₆	
40521	Medium RNA Reagent Reservoir ²	UP ₉₆	
40531	Low RNA Reagent Reservoir ²	UP ₉₆	
91011	Synthetic Positive Controls for Respiratory Pathogens	HP ₂₄	UP ₉₆
Highplex Alliance™		HP ₂₄	
93100	MT-Prep™ 24		
90501	Highplex		
Ultraplex Alliance™			UP ₉₆
93600	MT-Prep™ XL		
94601	Ultraplex 3		

¹ For Highplex: Demi Reagent Cassettes are for 8-well panels; Low for 12-well, 16-well, and 24-well

² For Ultraplex 3: Low Reagent Reservoirs are for 8-well universal panels; medium for 12-well and 24-well

Ordering information on consumables for the Highplex Alliance™ and Ultraplex Alliance™ is available from your local AusDiagnostics representative.

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