

RUO

Respiratory pathogen molecular testing research products

Enabling laboratories to use the same sample to research multiple pathogens

applied biosystems

Applied Biosystems real-time PCR respiratory research products

Real-time PCR products with high analytical sensitivity are needed to support laboratory research to study outbreaks and determine disease etiology where pathogens are similar.

Applied Biosystems™ real-time PCR respiratory research products are used to analyze a range of respiratory pathogens, including viruses, bacteria, and fungi, with high analytical sensitivity.

These solutions are efficient, generate informative results, and solve many of the challenges associated with the use of immunoassay-based, culture-based, and other molecular research methods.

Testing methods

Various testing approaches for a broader range of pathogen research

To meet laboratories' needs for various testing approaches, Thermo Fisher Scientific offers multiple solutions for respiratory pathogen testing.

Our respiratory portfolio offers highly sensitive molecular testing solutions for detecting and studying from 4 to over 40 respiratory pathogens, including bacteria, viruses, and fungi across multiple sample types to meet your lab's needs.



Single- or dual-analyte testing
Assays built to test for one or two targets (e.g., SARS-CoV-2 or SARS-CoV-2 combined with the influenza virus)



Targeted panels
Assays built to test from two to nine targets that cause overlapping symptoms



Syndromic panels
Assays built to test from 10 to 30 targets and that can be customized to the lab's needs

Research solutions

Targeted panels

Applied Biosystems™ TrueMark™ Respiratory I/II/III Plus Panels

- 8-target panels offer an intermediate approach to testing with focus on viral-only or bacterial-only panels
- Duplex reaction with internal RNase P control adds confidence in results
- Expand menu with existing 96-well equipment

Product details						
Regulatory status	For Research Use Only. Not for use in diagnostic procedures.					
Format	Pre-spotted 96-well plates					
Viral	TrueMark Respiratory I Plus Panel		TrueMark Respiratory II Plus Panel		TrueMark Respiratory III Plus Panel	
	<i>Adenovirus</i>	<i>Influenza B</i>	<i>Coronavirus 229E</i>	<i>Parainfluenza virus 1</i>	<i>Chlamydia pneumoniae</i>	<i>Moraxella catarrhalis</i>
	<i>Enterovirus (EV)</i>	<i>Respiratory syncytial virus A/B (RSV)</i>	<i>Coronavirus HKU1</i>	<i>Parainfluenza virus 2</i>	<i>Haemophilus influenzae</i>	<i>Mycoplasma pneumoniae</i>
	<i>Human Metapneumovirus (hMPV)</i>	<i>Rhinovirus</i>	<i>Coronavirus NL63</i>	<i>Parainfluenza virus 3</i>	<i>Klebsiella pneumoniae</i>	<i>Staphylococcus aureus</i>
	<i>Influenza A (Pan)</i>	<i>SARS-CoV-2</i>	<i>Coronavirus OC43</i>	<i>Parainfluenza virus 4</i>	<i>Legionella pneumophila</i>	<i>Streptococcus pneumoniae</i>
Kit size	120 samples/10-pack					
Throughput	12 samples/plate					
Control(s)	RNase P internal control + positive control available					
Sample type	Nasopharyngeal swab					
Turnaround time	Approx. 4 hours					
Instruments	QuantStudio 5 and QuantStudio 7 Pro real-time PCR instruments recommended; others available upon request					
Software	QuantStudio Design and Analysis Software					
Cat. No.	TrueMark Respiratory I Plus Panel A56284C TrueMark Respiratory II Plus Panel A56286C TrueMark Respiratory III Plus Panel A56287C Request a quote for TrueMark Custom Panels at thermofisher.com/customquote					

Syndromic panels

Applied Biosystems™ TrueMark™ Respiratory Panel 2.0, TaqMan™ Array Card

- Fast, easy setup
- Only requires 8 samples to fill a card
- Broad coverage of viral, bacterial, and fungal targets
- Low risk of user error or contamination

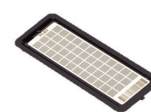
Product details				
Regulatory status	For Research Use Only. Not for use in diagnostic procedures.			
Format	TaqMan Array Card			
Bacterial	<i>Bordetella (Pan)</i>	<i>Haemophilus influenzae</i>	<i>Moraxella catarrhalis</i>	<i>Streptococcus pneumoniae</i>
	<i>Bordetella pertussis</i>	<i>Klebsiella pneumoniae complex</i>	<i>Mycoplasma pneumoniae</i>	
	<i>Chlamydia pneumoniae</i>	<i>Legionella pneumophila</i>	<i>Staphylococcus aureus</i>	
Fungal	<i>Pneumocystis jirovecii</i>			
Viral	<i>Adenovirus</i>	<i>Herpesvirus 6 (HHV6)</i>	<i>Influenza B</i>	<i>Parechovirus</i>
	<i>Bocavirus</i>	<i>HHV3 (varicella zoster virus)</i>	<i>Measles virus</i>	<i>Respiratory Syncytial Virus A (RSV A)</i>
	<i>Coronavirus 229E</i>	<i>HHV4 (Epstein-Barr virus)</i>	<i>MERS-CoV</i>	<i>Respiratory Syncytial Virus B (RSV B)</i>
	<i>Coronavirus HKU1</i>	<i>HHV5 (cytomegalovirus)</i>	<i>Mumps virus</i>	<i>Rhinovirus</i>
	<i>Coronavirus NL63</i>	<i>Human Metapneumovirus (hMPV)</i>	<i>Parainfluenza virus 1</i>	<i>SARS-CoV (SARS)</i>
	<i>Coronavirus OC43</i>	<i>Influenza A (Pan)</i>	<i>Parainfluenza virus 2</i>	<i>SARS-CoV-2</i>
	<i>Enterovirus D68</i>	<i>Influenza A/H1-2009</i>	<i>Parainfluenza virus 3</i>	
	<i>Enterovirus Pan</i>	<i>Influenza A/H3</i>	<i>Parainfluenza virus 4</i>	
Kit size	80 samples/10-pack			
Throughput	8 samples/card			
Control(s)	<i>Bacillus atrophaceus</i> , 18S Xeno, and RNase P + positive control available			
Sample type(s)	Nasopharyngeal swab, nasopharyngeal aspirate, and bronchoalveolar lavage (BAL)			
Turnaround time	Approx. 5 hours total			
Instruments	QuantStudio 7 Pro or QuantStudio 12K Flex real-time PCR instruments			
Software	Relative Quantification Application			
Cat. No.	A49047			

Applied Biosystems™ TrueMark™ Respiratory Panel 2.0, OpenArray™ Plate

- Low cost per pathogen
- Highly scalable, allowing for up to 288 samples/day
- Allows for simultaneous testing of multiple panel types by running up to 4 OpenArray Plates per PCR run

Product details				
Regulatory status	For Research Use Only. Not for use in diagnostic procedures.			
Format	OpenArray Plate			
Bacterial	<i>Bordetella (Pan)</i>	<i>Haemophilus influenzae</i>	<i>Moraxella catarrhalis</i>	<i>Streptococcus pneumoniae</i>
	<i>Bordetella pertussis</i>	<i>Klebsiella pneumoniae</i> complex	<i>Mycoplasma pneumoniae</i>	
	<i>Chlamydia pneumoniae</i>	<i>Legionella pneumophila</i>	<i>Staphylococcus aureus</i>	
Fungal	<i>Pneumocystis jirovecii</i>			
Viral	<i>Adenovirus</i>	<i>Herpesvirus 6 (HHV6)</i>	<i>Influenza B</i>	<i>Parechovirus</i>
	<i>Bocavirus</i>	<i>HHV3 (varicella zoster virus)</i>	<i>Measles virus</i>	<i>Respiratory Syncytial Virus A (RSV A)</i>
	<i>Coronavirus 229E</i>	<i>HHV4 (Epstein-Barr virus)</i>	<i>MERS-CoV</i>	<i>Respiratory Syncytial Virus B (RSV B)</i>
	<i>Coronavirus HKU1</i>	<i>HHV5 (cytomegalovirus)</i>	<i>Mumps virus</i>	<i>Rhinovirus</i>
	<i>Coronavirus NL63</i>	<i>Human Metapneumovirus (hMPV)</i>	<i>Parainfluenza virus 1</i>	SARS-CoV (SARS)
	<i>Coronavirus OC43</i>	<i>Influenza A (Pan)</i>	<i>Parainfluenza virus 2</i>	SARS-CoV-2
	<i>Enterovirus D68</i>	<i>Influenza A/H1-2009</i>	<i>Parainfluenza virus 3</i>	
	<i>Enterovirus Pan</i>	<i>Influenza A/H3</i>	<i>Parainfluenza virus 4</i>	
Kit size	240 samples/10-pack			
Throughput	24 samples/plate			
Control(s)	<i>B. atrophaceus</i> , Xeno, and RNase P + positive control available			
Sample type(s)	Bronchoalveolar lavage, nasopharyngeal swab, or nasopharyngeal aspirate samples			
Turnaround time	Approx. 5 hours total			
Instruments	QuantStudio 12K Flex real-time PCR instrument			
Software	Relative Quantification Application			
Cat. No.	A49044			

Testing format comparison



	Single-tube multiplex	96-well plates	384-well plates	384-well microfluidic cards	OpenArray nanofluidics
Format	Single-tube assay	Duplex (target and internal control) TaqMan Assays, prespotted		Singleplex TaqMan Assays, prespotted	
No. of assays	1 to 5 depending on plexy	4 and 8	12 and 24	24 or 48	18, 37, or 56
No. of samples	1–384	12–24	16–32	1–8	12–48
Reaction volume	10 µL, 20 µL	10 µL, 20 µL	10 µL	1 µL	33 nL
Instruments	7500 or any QuantStudio instrument	QuantStudio 5 Real-Time PCR System and QuantStudio 7 Pro Real-Time PCR System Other instruments available upon request	QuantStudio 5 and QuantStudio 7 Pro instruments Other instruments available upon request	QuantStudio 7 Pro instrument QuantStudio 12K Flex instrument	QuantStudio 12K Flex instrument
Benefit	Flexibility in sample throughput; load wells only as needed	Panels with multiple targets that offer an intermediate approach to testing		Fast, easy setup	Lowest cost per pathogen for broad pathogen detection studies

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Respiratory targets to product

		Applied Biosystems TrueMark Respiratory I/II/III Plus Panel			Applied Biosystems TrueMark Respiratory Panel 2.0 TaqMan	
		Respiratory I Plus Panel	Respiratory II Plus Panel	Respiratory III Plus Panel	Array Card	OpenArray Plate
Bacterial	<i>Bordetella (Pan)</i>				•	•
	<i>Bordetella pertussis</i>				•	•
	<i>Chlamydia pneumoniae</i>			•	•	•
	<i>Haemophilus influenzae</i>			•	•	•
	<i>Klebsiella pneumoniae complex</i>			•	•	•
	<i>Legionella pneumophila</i>			•	•	•
	<i>Moraxella catarrhalis</i>			•	•	
	<i>Mycoplasma pneumoniae</i>			•	•	•
	<i>Staphylococcus aureus</i>			•	•	•
	<i>Streptococcus pneumoniae</i>			•	•	•
Fungal	<i>Pneumocystis jirovecii</i>				•	
Viral	Adenovirus	•			•	•
	Bocavirus				•	
	Coronavirus 229E		•		•	•
	Coronavirus HKU1		•		•	•
	Coronavirus NL63		•		•	•
	Coronavirus OC43		•		•	•
	Enterovirus D68				•	•
	Enterovirus Pan				•	
	Herpesvirus 6 (HHV6)				•	•
	HHV3 (varicella zoster virus)				•	
	HHV4 (Epstein-Barr virus)				•	•
	HHV5 (cytomegalovirus)				•	•
	Human Metapneumovirus (hMPV)	•			•	•
	Influenza A (Pan)	•			•	•
	Influenza A/H1-2009				•	•
	Influenza A/H3				•	•
	Influenza B	•			•	•
	Measles virus				•	
	MERS-CoV				•	
	Mumps virus				•	
	Parainfluenza virus 1		•		•	•
	Parainfluenza virus 2		•		•	•
	Parainfluenza virus 3		•		•	•
	Parainfluenza virus 4		•		•	•
	Parechovirus				•	
	Respiratory Syncytial Virus A (RSV A)				•	•
	Respiratory Syncytial Virus B (RSV B)				•	•
	Rhinovirus	•			•	•
	SARS-CoV (SARS)				•	
	SARS-CoV-2	•			•	•

 Find out more at thermofisher.com/respiratoryruo

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