Comprehensive respiratory tract microbiota detection

Get more answers with our flexible-content real-time PCR solutions

Respiratory tract infections can lead to a number of diseases of the upper and lower respiratory tracts that are caused by microbes such as viruses, bacteria, and even fungi. Detection of these pathogens can be challenging; immunoassays provide limited answers, and culture-based methods are prone to contamination and can miss bacterial and fungal pathogens, owing to fastidious growth in culture. While molecular testing is more sensitive, most commercially available molecular tests are expensive, primarily focus on either viruses or bacteria, and lack the flexibility to include specific targets that are relevant to a cohort or regional population.

Our new real-time PCR solution for respiratory tract microbiota (RTM) is a sensitive, syndromic panel–based flexible-content solution for the detection of respiratory pathogens. The Applied Biosystems™ TaqMan® Array Respiratory Tract Microbiota Comprehensive Card and TaqMan® OpenArray™ Respiratory Tract Microbiota Plate leverage the power of the Applied Biosystems™ QuantStudio™ 12K Flex Real-Time PCR System to form a complete, end-to-end solution for respiratory pathogen detection.

Features

- **Extensive coverage**—with 42 qualified pathogen target assays, our solution features the most pathogen targets of any respiratory panel-based test on the market

- **Off-the-shelf or customizable options**—verified for TaqMan array cards and OpenArray plates to meet your throughput needs

- **Cost-effective**—up to 3 times more cost-effective compared to other commercially available respiratory panel–based molecular tests

- **Multiple sample input types**—including nasopharyngeal swabs, bronchoalveolar lavage (BAL), and nasal aspirate

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Our RTM solution has been optimized for 384-well microfluidic TaqMan array cards and TaqMan OpenArray plates.

Respiratory tract microbiota targets

Pathogen type	Target pathogen
Bacterial	Bordetella*
	Bordetella holmesii
	*Bordetella pertussis**
	*Chlamydia pneumoniae**
	*Mycoplasma pneumoniae**
	*Streptococcus pneumoniae**
	Coxiella burnetii
	*Staphylococcus aureus**
	*Klebsiella pneumoniae**
	*Legionella pneumophila**
	Moraxella catarrhalis
	*Haemophilus influenzae**
Fungal	*Pneumocystis jirovecii*
Viral	Adenovirus*
	Coronavirus HKU1*
	Coronavirus NL63*
	Coronavirus 229E*
	Coronavirus OC43*
	Human metapneumovirus*
	Rhinovirus*
	Enterovirus*
	Enterovirus D68*
	Influenza A (Pan)*
	Influenza A/H1-2009*
	Influenza A/H3*
	Influenza B (Pan)*
	Parainfluenza 1*
	Parainfluenza 2*
	Parainfluenza 3*
	Parainfluenza 4*
	Respiratory Syncytial Virus A*
	Respiratory Syncytial Virus B*
	Bocavirus*
	Epstein-Barr virus (EBV)*
	SARS-CoV
	MERS-CoV
	Mumps
	Measles
	Cytomegalovirus*
	Human herpesvirus 6 (HHV-6)*
	Varicella zoster virus (VZV)*
	Parechovirus

All are included with TaqMan array card. * Indicates those included with OpenArray plate.

TaqMan array card format for respiratory pathogen detection

Feature	Specification
No. of wells	384
No. of targets	42 respiratory plus 4 control (Xeno, RNase P, 18s, and *Bacillus atrophaeus*)
No. of samples	8
Master mix volume	400 µL per TaqMan array card (384 reactions)
Reaction volume	1 µL
Samples/day	Up to 64
Compatible instruments	QuantStudio 12K Flex Real-Time PCR System with TaqMan array card block
Time-to-results	4 hours

OpenArray plate format for respiratory pathogen detection

Feature	Specification
No. of wells	2,688
No. of targets	33 respiratory plus 3 control (Xeno, RNase P, and *Bacillus atrophaeus*)
No. of samples	Up to 24 samples per plate (spotted in triplicate)
Master mix volume	120 µL per OpenArray plate
Reaction volume	33 nL
Samples/day	Up to 288
Compatible instruments	QuantStudio 12K Flex Real-Time PCR System with OpenArray block
Time-to-results	5 hours

Ordering information

Product	Quantity	Cat. No.
TaqMan Array Respiratory Tract Microbiota Comprehensive Card	1 card	A41238
TaqMan OpenArray Respiratory Tract Microbiota Plate	1 plate	A41237

Explore our complete menu of pathogen detection solutions at **thermofisher.com/pathogendetection**

Find out more at **thermofisher.com/rtm**

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