MultNAT Respiratory Panel

The Challenges

Respiratory targets pose significant challenges to human health due to their high transmissibility, ability to cause a wide range of diseases, and impact on vulnerable populations. Spread through droplets, aerosols, and contact, they can lead to acute and chronic conditions, exacerbate comorbidities, and overwhelm healthcare systems, especially during pandemics like influenza or COVID-19. The rise of antibiotic and antiviral resistance complicates treatment, while delayed or inadequate diagnostics hinder effective control. Vulnerable groups, including children, the elderly, and those with weakened immunity, are at higher risk. These pathogens also impose substantial socioeconomic burdens, disrupting education, productivity, and economies. Advanced diagnostic are crucial to mitigating their impact.

The Solution

This product is a multiplexed nucleic acid test intended for the simultaneous qualitative detection and identification of multiple respiratory pathogen nucleic acids in nasopharyngeal swabs (NPS) obtained from individuals suspected of respiratory tract infections. The following respiratory targets are identified using this product:

Viruses:

Adenovirus, Coronavirus 229E, Coronavirus HKU1, Coronavirus NL63, Coronavirus OC43, MERS-CoV, SARS-CoV-2, Human metapneumovirus, Human rhinovirus/enterovirus, Influenza A virus, Influenza A virus A/H1, Influenza A virus A/H3, Influenza A virus A/H1-2009, Influenza B virus, Parainfluenza virus, Parainfluenza virus 2, Parainfluenza virus 3, Parainfluenza virus 4, Respiratory syncytial virus

Bacterial:

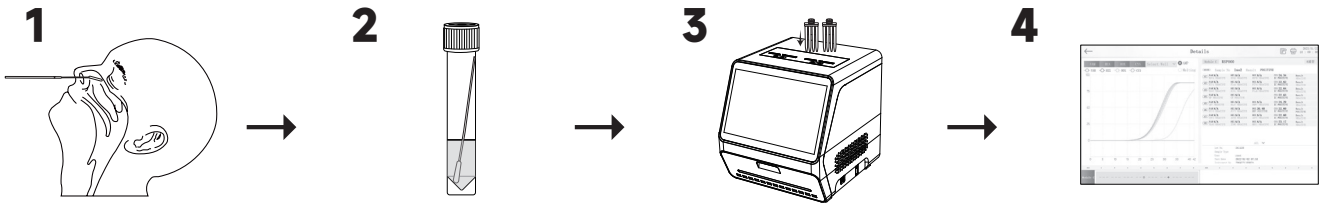
Bordetella parapertussis, Bordetella pertussis, Mycoplasma pneumoniae, Legionella pneumophila

The Feature

1. Streamlined process delivers precise Nucleic Acid Amplification Test (NAAT) results around **70 minutes.**
2. Point-of-care Nucleic Acid Testing applicable across diverse medical settings.
3. Comprehensive detection of 23 distinct targets supports physicians in prescribing targeted treatments.

Ustar Biotechnologies (Hangzhou) Ltd.

Workflow



Add Sample → Collect Sample → Load to catridge and test on MultNAT system immediately → Report Result

Clinical Value

Comprehensive	The USTAR MultNAT Respiratory Panel detects and differentiates 23 targets of respiratory targets, including viruses and bacteria, offering broad diagnostic capabilities. This ensures timely identification of the causative agent for respiratory infections.
Tailored	Differentiating between viral and bacterial targets helps reduce unnecessary antibiotic use and guides targeted therapy, improving patient outcomes and combating antimicrobial resistance.
Scientific	Rapid and reliable identification of targets enables physicians to initiate appropriate treatment, reduce complications, and minimize hospital stays, enhancing overall patient care.

Performance

Turn-around Time	around 70 minutes
Target	23 Respiratory targets
Specificity	98.79%
Sensitivity	98.62%
Total Agreement	98.65%
Sample Types	Nasopharyngeal swab

Product	MultNAT Respiratory Panel	**Shelf life**	12 months
Applicable instrument	MultNAT Molecular Diagnostic Testing System	**Storage conditions**	2-8°C
Specification	5 Tests/box	**Transport conditions**	Ambient Temperature

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