



**OMNIHEALTH**  
DIAGNOSTICS



## **RESPIRATORY PATHOGEN PANEL**

Personalized for the Patient. Rapid, sensitive, and multiplexed real-time PCR based detection of respiratory pathogens

The clinical presentation of respiratory pathogens is very similar, complicating diagnosis and appropriate therapy selection. Traditional diagnostic methods **can be slow** and **miss the cause of infection**.

Respiratory Tract Infections cause more doctor visits and absences from school and work than any other illness. <sup>1</sup>

**1 Billion**  
colds in the United States per year<sup>2</sup>  
and approximately

**500 Million**  
non-influenza Infections<sup>1,3,4</sup>

Children get  
**6-10**  
colds per year<sup>2</sup>

High-Risk Groups are more likely to die from complications or be hospitalized with worsening conditions. <sup>5</sup>

Children younger than 5  
especially children less than 2 years old

**Adults 65 years of age and older**

Pregnant women

**Critically ill patients**  
especially immunocompromised,  
e.g. cancer and transplant patients

Traditional Diagnostic Methods are slow and do not offer comprehensive pathogen detection.

Antigen detection, DFA, and culture delay treatment decisions

**8 HOURS TO 72 HOURS**

What are you missing?

It's not just flu:  
**ONLY 16%**  
of positive results are influenza <sup>6</sup>

1. Upper Respiratory Infection (URI or Common Cold). Johns Hopkins Medicine. Retrieved from [http://www.hopkinsmedicine.org/healthlibrary/conditions/pediatrics/upper\\_respiratory\\_infection\\_uri\\_or\\_common\\_cold\\_90,P02966/](http://www.hopkinsmedicine.org/healthlibrary/conditions/pediatrics/upper_respiratory_infection_uri_or_common_cold_90,P02966/) (Date accessed: May 2017)

2 The Common Cold Fact Sheet. National Institute of Allergy and Infectious Diseases, National Institutes of Health. December 2004.

3 Seasonal Influenza, More Information. Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/about/qa/disease.htm> (Date accessed: May 2017)

4 Seasonal Influenza. European Centre for Disease Prevention and Control.

5 Flu Symptoms & Complications. Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/about/disease/complications.htm> (Date accessed: May 2017)

6 Schreckenberger, P. and McAdam, A. (2015). Point-Counterpoint: Large Multiplex PCR Panels Should Be First-Line Tests for Detection of Respiratory and Intestinal Pathogens. *J Clin Microbiol.* 53(10):3110-5. doi: 10.1128/JCM.00382-15

Target	Classification (Genome Type)	Seasonal Prevalence*	Most Commonly Infected Demographic
Adenovirus (A-F)	Adenovirus (DNA)	Late winter to early summer <sup>7</sup>	All ages, immunocompromised <sup>8</sup>
Coronavirus (229E, HKU1, NL63, OC43)	Coronavirus (RNA)	Winter, spring <sup>9</sup>	All ages <sup>9</sup>
SARS-CoV-2	Coronavirus (RNA)	Unknown <sup>4</sup>	Not established <sup>4</sup>
Human Metapneumovirus	Paramyxovirus (RNA)	Winter <sup>10</sup>	Children, elderly, immunocompromised <sup>11</sup>
Human Rhinovirus/ Enterovirus	Picornavirus (RNA)	Fall, spring <sup>12</sup> / Summer <sup>13</sup>	All ages, immunocompromised <sup>12, 13, 14</sup>
Influenza A	Orthomyxovirus (RNA)	Winter <sup>3</sup>	All ages <sup>3</sup>
Influenza A H1			
Influenza A H1-2009			
Influenza A H3			
Influenza B			
Parainfluenza Virus 1	Paramyxovirus (RNA)	Fall <sup>15</sup>	All ages <sup>16</sup>
Parainfluenza Virus 2		Fall, early winter <sup>15</sup>	
Parainfluenza Virus 3		Spring, summer <sup>15</sup>	
Parainfluenza Virus 4		Fall, early winter <sup>15</sup>	
Respiratory Syncytial Virus A	Paramyxovirus (RNA)	Winter <sup>17, 18</sup>	Infants, children, older adults <sup>17, 18</sup>
Respiratory Syncytial Virus B			
<i>Chlamydia pneumoniae</i>	Bacterium (DNA)	No peak season <sup>19</sup>	All ages, most common in children <sup>19</sup>
<i>Mycoplasma pneumoniae</i>	Bacterium (DNA)	Late summer, fall <sup>20</sup>	Children, young adults <sup>21</sup>
<i>Streptococcus pneumoniae</i>	Bacterium (DNA)		