

# Illumina Respiratory Pathogen ID/AMR Panel

- Identify COVID-19 and determine viral variants and lineages
- Detect both DNA- and RNA-based respiratory pathogens simultaneously
- Report full genome coverage of SARS-CoV-2 and Influenza A/B viruses
- Profile antimicrobial resistance (AMR) gene expression concurrently

| BACTERIA                                     |                                     |   |  |                                     |  |
|--|-------------------------------------|---|--|-------------------------------------|--|
| <i>Achromobacter denitrificans</i>           | <i>Bartonella henselae</i>          | <i>Cardiobacterium hominis</i>              | <i>Elizabethkingia meningoseptica</i>                | <i>Haemophilus influenzae</i>       | <i>Mycobacterium goodii</i>                                    |
| <i>Achromobacter xylosoxidans</i>            | <i>Bartonella quintana</i>          | <i>Cardiobacterium valvarum</i>             | <i>Enterobacter cloacae</i> complex                  | <i>Haemophilus parahaemolyticus</i> | <i>Mycobacterium kansasii</i>                                  |
| <i>Acinetobacter baumannii</i>               | <i>Bordetella bronchiseptica</i>    | <i>Chlamydia pneumoniae</i>                 | <i>Enterococcus faecalis</i>                         | <i>Haemophilus parainfluenzae</i>   | <i>Mycobacterium malmoense</i>                                 |
| <i>Acinetobacter lwoffii</i>                 | <i>Bordetella hinzii</i>            | <i>Chlamydia psittaci</i>                   | <i>Enterococcus faecium</i>                          | <i>Haemophilus pittmaniae</i>       | <i>Mycobacterium parascrofulaceum</i>                          |
| <i>Acinetobacter nosocomialis</i>            | <i>Bordetella holmesii</i>          | <i>Chlamydia trachomatis</i>                | <i>Escherichia coli</i>                              | <i>Hafnia alvei</i>                 | <i>Mycobacterium scrofulaceum</i>                              |
| <i>Acinetobacter pittii</i>                  | <i>Bordetella parapertussis</i>     | <i>Chromobacterium violaceum</i>            | <i>Eubacterium brachy</i>                            | <i>Klebsiella variicola</i>         | <i>Mycobacterium szulgai</i>                                   |
| <i>Actinomyces graevenitzii</i>              | <i>Bordetella pertussis</i>         | <i>Citrobacter freundii</i>                 | <i>Eubacterium limosum</i>                           | <i>Kytococcus sedentarius</i>       | <i>Mycobacterium tuberculosis</i>                              |
| <i>Actinomyces israelii</i>                  | <i>Bordetella petrii</i>            | <i>Citrobacter koseri</i>                   | <i>Eubacterium nodatum</i>                           | <i>Leclercia adecarboxylata</i>     | <i>Mycobacterium xenopi</i>                                    |
| <i>Actinomyces meyeri</i>                    | <i>Brucella abortus</i>             | <i>Corynebacterium diphtheriae</i>          | <i>Fingoldia magna</i>                               | <i>Legionella anisa</i>             | <i>Mycobacteroides abscessus</i> (Mycobacterium abscessus)     |
| <i>Actinomyces naeslundii</i>                | <i>Brucella canis</i>               | <i>Corynebacterium jeikeium</i>             | <i>Francisella tularensis</i>                        | <i>Legionella feeleii</i>           | <i>Mycobacteroides chelonae</i> (Mycobacterium chelonae)       |
| <i>Actinomyces odontolyticus</i>             | <i>Brucella melitensis</i>          | <i>Corynebacterium propinquum</i>           | <i>Fusobacterium necrophorum</i>                     | <i>Legionella longbeachae</i>       | <i>Mycobacteroides immunogenum</i> (Mycobacterium immunogenum) |
| <i>Aeromonas caviae</i>                      | <i>Brucella suis</i>                | <i>Corynebacterium pseudodiphtheriticum</i> | <i>Fusobacterium nucleatum</i>                       | <i>Legionella maceachernii</i>      | <i>Mycoplasma pneumoniae</i>                                   |
| <i>Aeromonas hydrophila</i>                  | <i>Burkholderia cepacia</i> complex | <i>Corynebacterium pseudotuberculosis</i>   | <i>Gemella haemolysans</i>                           | <i>Legionella pneumophila</i>       | <i>Neisseria flavescens</i>                                    |
| <i>Aeromonas sobria</i>                      | <i>Burkholderia gladioli</i>        | <i>Corynebacterium striatum</i>             | <i>Gemella morbillorum</i>                           | <i>Legionella wadsworthii</i>       | <i>Neisseria lactamica</i>                                     |
| <i>Aeromonas veronii</i>                     | <i>Burkholderia glumae</i>          | <i>Corynebacterium ulcerans</i>             | <i>Gordonia araii</i>                                | <i>Leptospira interrogans</i>       | <i>Neisseria meningitidis</i>                                  |
| <i>Aggregatibacter actinomycetemcomitans</i> | <i>Burkholderia mallei</i>          | <i>Coxiella burnetii</i>                    | <i>Gordonia bronchialis</i>                          | <i>Leptotrichia buccalis</i>        | <i>Neisseria mucosa</i>  |
| <i>Aggregatibacter aphrophilus</i>           | <i>Burkholderia pseudomallei</i>    | <i>Cronobacter sakazakii</i>                | <i>Haemophilus haemolyticus</i>                      | <i>Listeria monocytogenes</i>       | <i>Nocardia abscessus</i>                                      |
| <i>Arcanobacterium haemolyticum</i>          | <i>Burkholderia thailandensis</i>   | <i>Delftia acidovorans</i>                  | <i>Kingella kingae</i>                               | <i>Moraxella catarrhalis</i>        | <i>Nocardia arthritidis</i>                                    |
| <i>Bacillus anthracis</i>                    | <i>Campylobacter concisus</i>       | <i>Dialister pneumosintes</i>               | <i>Klebsiella aerogenes</i> (Enterobacter aerogenes) | <i>Moraxella osloensis</i>          | <i>Nocardia beijingensis</i>                                   |
| <i>Bacillus cereus</i>                       | <i>Capnocytophaga gingivalis</i>    | <i>Dolosigranulum pigrum</i>                | <i>Klebsiella oxytoca</i>                            | <i>Morganella morganii</i>          | <i>Nocardia brasiliensis</i>                                   |

| BACTERIA, cont.                  |                                      |                                   |   |  |  |
|----------------------------------|--------------------------------------|-----------------------------------|---|--|--|
| <i>Bacillus thuringiensis</i>    | <i>Capnocytophaga leadbetteri</i>    | <i>Eikenella corrodens</i>        | <i>Klebsiella pneumoniae</i>  | <i>Mycobacterium avium</i> complex                       | <i>Nocardia cyriacigeorgica</i>                            |
| <i>Bacteroides fragilis</i>      | <i>Capnocytophaga sputigena</i>      | <i>Elizabethkingia anophelis</i>  | <i>Klebsiella quasipneumoniae</i>                                   | <i>Mycobacterium fortuitum</i>                           | <i>Nocardia farcinica</i>                                  |
| <i>Nocardia nova</i>             | <i>Pediococcus acidilactici</i>      | <i>Pseudomonas aeruginosa</i>     | <i>Serratia marcescens</i>  | <i>Streptococcus intermedius</i>                         | <i>Ureaplasma urealyticum</i>                              |
| <i>Nocardia otitidiscaviarum</i> | <i>Peptostreptococcus anaerobius</i> | <i>Pseudomonas fluorescens</i>    | <i>Shewanella putrefaciens</i>                                      | <i>Streptococcus mitis</i>                               | <i>Veilonella parvula</i>                                  |
| <i>Nocardia transvalensis</i>    | <i>Prevotella buccae</i>             | <i>Pseudomonas stutzeri</i>       | <i>Slackia exigua</i>   | <i>Streptococcus pneumoniae</i>                          | <i>Williamsia muralis</i>                                  |
| <i>Nocardia veterana</i>         | <i>Prevotella intermedia</i>         | <i>Ralstonia pickettii</i>        | <i>Sphingomonas paucimobilis</i>                                    | <i>Streptococcus pyogenes</i>                            | <i>Yersinia enterocolitica</i>                             |
| <i>Ochrobactrum anthropi</i>     | <i>Prevotella melaninogenica</i>     | <i>Raoultella ornithinolytica</i> | <i>Staphylococcus aureus</i>  | <i>Tatlockia micdadei</i> ( <i>Legionella micdadei</i> ) | <i>Yersinia pestis</i>                                     |
| <i>Orientia tsutsugamushi</i>    | <i>Prevotella pleuritidis</i>        | <i>Raoultella planticola</i>      | <i>Stenotrophomonas maltophilia</i>                                 | <i>Treponema denticola</i>                               |  |
| <i>Pandoraea pulmonicola</i>     | <i>Proteus mirabilis</i>             | <i>Rhodococcus hoagii</i>         | <i>Streptococcus agalactiae</i>                                     | <i>Tropheryma whipplei</i>                               |  |
| <i>Pantoea agglomerans</i>       | <i>Proteus penneri</i>               | <i>Rickettsia rickettsii</i>      | <i>Streptococcus anginosus</i>                                      | <i>Tsukamurella pulmonis</i>                             |  |
| <i>Parvimonas micra</i>          | <i>Proteus vulgaris</i>              | <i>Rothia mucilaginosus</i>       | <i>Streptococcus constellatus</i>                                   | <i>Tsukamurella tyrosinosolvans</i>                      |  |
| <i>Pasteurella multocida</i>     | <i>Providencia stuartii</i>          | <i>Salmonella enterica</i>        | <i>Streptococcus dysgalactiae</i>                                   | <i>Ureaplasma parvum</i>                                 |  |
| VIRUSES                          |                                      |                                   |   |  |  |
| Coxsackievirus A                 | HHV6                                 | Human Coronavirus NL63            | Human parechovirus  | Influenza C virus  | Rhinovirus A   |
| Coxsackievirus B                 | Human adenovirus B                   | Human Coronavirus OC43            | Influenza A virus (H1N1)  | Measles Virus  | Rhinovirus B   |
| Cytomegalovirus (CMV)            | Human adenovirus C                   | Human metapneumovirus             | Influenza A virus (H3N2)  | MERS coronavirus (MERS-CoV)                              | Rhinovirus C   |
| EBV                              | Human adenovirus E                   | Human parainfluenza virus 1       | Influenza A virus (H5N1)  | Mumps virus  | Rubella virus  |
| Enterovirus A71                  | Human bocavirus 1                    | Human parainfluenza virus 2       | Influenza A virus (H7N9)  | Parvovirus B19   | SARS coronavirus   |
| Enterovirus D68                  | Human Coronavirus 229E               | Human parainfluenza virus 3       | Influenza A virus (H9N2)  | Respiratory Syncytial Virus A                            | SARS-CoV-2 (2019-nCoV)                                     |
| Herpes simplex virus 1 (HSV-1)   | Human Coronavirus HKU1               | Human parainfluenza virus 4       | Influenza B virus   | Respiratory Syncytial Virus B                            | Varicella-zoster virus (HHV-3)                             |
| FUNGI                            |                                      |                                   |   |  |  |
| <i>Alternaria alternata</i>      | <i>Blastomyces dermatitidis</i>      | <i>Curvularia lunata</i>          | <i>Lomentospora prolificans</i> ( <i>Scedosporium prolificans</i> ) | <i>Pneumocystis jirovecii</i>                            | <i>Sarocladium kiliense</i> ( <i>Acremonium kiliense</i> ) |
| <i>Alternaria infectoria</i>     | <i>Candida auris</i>                 | <i>Exophiala dermatitidis</i>     | <i>Microascus cinereus</i> ( <i>Scopulariopsis cinereus</i> )       | <i>Purpureocillium lilacinum</i>                         | <i>Scedosporium apiospermum</i>                            |
| <i>Apophysomyces elegans</i>     | <i>Cladophialophora bantiana</i>     | <i>Fusarium oxysporum</i>         | <i>Microascus cirrosus</i> ( <i>Scopulariopsis paisii</i> )         | <i>Rasamsonia aegroticola</i>                            | <i>Schizophyllum commune</i>                               |
| <i>Aspergillus flavus</i>        | <i>Coccidioides immitis</i>          | <i>Fusarium proliferatum</i>      | <i>Microascus paisii</i> ( <i>Scopulariopsis brumptii</i> )         | <i>Rasamsonia argillacea</i>                             | <i>Scopulariopsis brevicaulis</i>                          |
| <i>Aspergillus fumigatus</i>     | <i>Coccidioides posadasii</i>        | <i>Fusarium solani</i>            | <i>Mucor circinelloides</i>   | <i>Rhizomucor pusillus</i>                               | <i>Sporothrix schenckii</i>                                |
| <i>Aspergillus nidulans</i>      | <i>Cryptococcus gattii</i>           | <i>Fusarium verticillioides</i>   | <i>Mucor indicus</i>  | <i>Rhizopus azygosporus</i>                              | <i>Syncephalastrum racemosum</i>                           |
| <i>Aspergillus niger</i>         | <i>Cryptococcus neoformans</i>       | <i>Histoplasma capsulatum</i>     | <i>Mucor racemosus</i>  | <i>Rhizopus microsporus</i>                              | <i>Talaromyces marneffeii</i>                              |
| <i>Aspergillus terreus</i>       | <i>Cunninghamella bertholletiae</i>  | <i>Lichtheimia corymbifera</i>    | <i>Paecilomyces variotii</i>  | <i>Rhizopus oryzae</i>                                   | <i>Trichosporon asahii</i>                                 |
| <i>Aspergillus versicolor</i>    | <i>Curvularia geniculata</i>         | <i>Lichtheimia ramosa</i>         | <i>Paracoccidioides brasiliensis</i>                                | <i>Saksenaia vasiformis</i>                              |  |

### Drug classes on the Respiratory Pathogen ID/AMR Panel

|               |  |                    |   |
|---------------|--|--------------------|---|
| Bacteria      | <i>A. baumannii</i><br><i>E. faecalis</i><br><i>E. faecium</i><br><i>E. cloacae complex</i><br><i>E. coli</i><br><i>K. pneumoniae</i><br><i>P. aeruginosa</i><br><i>S. aureus</i><br><i>S. maltophilia</i><br><i>S. pneumoniae</i> | Antibacterials     | Aminoglycosides   |
|               |  |                    | Beta-lactam + beta-lactamase inhibitor  |
|               |  |                    | Carbapenems   |
|               |  |                    | Cephalosporins (1st generation)   |
|               |  |                    | Cephalosporins (2nd generation)   |
|               |  |                    | Cephalosporins (3rd generation)   |
|               |  |                    | Cephalosporins (4th generation)   |
|               |  |                    | Diaminopyrimidine   |
|               |  |                    | Fluoroquinolones  |
|               |  |                    | Fosfomycin  |
|               |  |                    | Glycopeptides   |
|               |  |                    | Lincosamides  |
|               |  |                    | Macrolides  |
|               |  |                    | Oxazolidinones  |
| Penicillins   |  |                    |   |
| Polymyxins    |  |                    |   |
| Sulfonamides  |  |                    |   |
| Tetracyclines |  |                    |   |
| Mycobacteria  | <i>M. tuberculosis complex</i><br><i>M. abscessus</i>  | Antimycobacterials | <b>First-line:</b><br>Isoniazids<br>Polyamine antibiotics<br>Pyrazinamides<br>Rifamycin antibiotics     |
|               |  |                    | <b>Second-line:</b><br>Ethionamides<br>Para-aminosalicylic acids<br>Aminoglycosides<br>Fluoroquinolones |
| Viruses       | Influenza A (H1N1)<br>Influenza A (H3N2)<br>Influenza A (H5N1)<br>Influenza A H7N9)  | Antivirals         | Neuraminidase inhibitors  |
|               |  |                    | Endonuclease inhibitors   |
|               |  |                    |   |
|               |  |                    |   |

## Learn more

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[Explify RPIP Data Analysis on BaseSpace Sequence Hub](#)

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