

dPCR Microbial DNA Detection Assays

Assay/target list

The dPCR Microbial DNA Detection Assays are designed to test for the presence of bacterial, fungal, parasitic, viral, antibiotic resistance or virulence factor genes using digital PCR. The assays can be run on the QIAcuity® in about two hours with minimal hands-on time. The assays target over 680 bacterial, fungal, parasitic, viral, antibiotic resistance or virulence factor genes. The assay product consists of a tube containing primer pair and a hydrolysis probe and is configurable for the dye (fluorophore). Selectable channels are FAM, HEX, ROX, TAMRA, and Cy5 to enable a mix and match of up to 5 targets/

assay in a dPCR multiplex reaction. However, each assay supplies enough material to perform 200 x 40 µl dPCR reactions in Nanoplates 26k or 666 dPCR reactions in Nanoplates 8.5k. A reaction is run by combining the assays with the QIAcuity Probe PCR Kit (for DNA targets) or the QIAcuity OneStep Advanced Probe Kit (for RNA or RNA+DNA targets).

More information on the dPCR Microbial DNA Detection Assays can be found at geneglobe.qiagen.com/products/analysis-type/analysis-type-dpcr.

Contents

Bacterial identification targets/assays	2–13
Fungal identification targets/assays	14–15
Parasite identification targets/assays	15
Viral identification targets/assay	15–17
Antibiotic resistance gene detection targets/assays	17–21
Virulence factor gene detection targets/assays	21–24
Ordering information	25

Table 1. Bacterial identification targets/assays

Target species (NCBI taxonomy ID)	Application field	GeneGlobe® catalog number	Wet-lab validated
<i>Abiotrophia defectiva</i> (46125)	Human pathogens	DMA00001	
<i>Achromobacter xylosoxidans</i> (85698)	Human pathogens	DMA00002	
<i>Acidaminococcus fermentans</i> (951)	Gastrointestinal pathogens	DMA00003	Yes
<i>Acinetobacter baumannii</i> (557601)	Infectious diseases	DMA00004	Yes
<i>Acinetobacter calcoaceticus</i> (471)	Human pathogens, Multiple drug resistance (MDR)	DMA00005	Yes
<i>Acinetobacter haemolyticus</i> (29430)	Human pathogens, MDR	DMA00006	Yes
<i>Actinobacillus hominis</i> (719)	Human microbiome	DMA00007	
<i>Gleimia europaea</i> (66228)	Human pathogens	DMA00008	
<i>Actinomyces gerencseriae</i> (52769)	Human pathogens	DMA00009	
<i>Actinomyces graevenitzi</i> (55565)	Infectious diseases	DMA00010	
<i>Actinomyces israelii</i> (1659)	Infectious diseases	DMA00011	Yes
<i>Actinomyces lingnae</i> (114702)	Infectious diseases	DMA00012	
<i>Actinomyces naeslundii</i> (1655)	Infectious diseases	DMA00013	Yes
<i>Schaalia odontolytica</i> (1660)	Infectious diseases	DMA00014	Yes
<i>Schaalia radingae</i> (131110)	Infectious diseases	DMA00015	
<i>Actinomyces urogenitalis</i> (103621)	Infectious diseases	DMA00016	
<i>Actinomyces viscosus</i> (1656)	Infectious diseases	DMA00017	Yes
<i>Aerococcus christensenii</i> (87541)	Human microbiome	DMA00018	
<i>Aerococcus viridans</i> (1377)	Infectious diseases	DMA00019	
<i>Aeromonas hydrophila</i> (644)	Gastrointestinal infections	DMA00020	
<i>Aeromonas veronii</i> (654)	Gastrointestinal pathogens	DMA00021	
<i>Aggregatibacter actinomycetemcomitans</i> (714)	Infectious diseases	DMA00022	
<i>Aggregatibacter segnis</i> (739)	Infectious diseases	DMA00023	
<i>Akkermansia muciniphila</i> (239935)	Human microbiome	DMA00024	Yes
<i>Alcaligenes faecalis</i> (511)	Sepsis, MDR	DMA00025	
<i>Alistipes putredinis</i> (28117)	Human microbiome	DMA00026	
<i>Anaerococcus hydrogenalis</i> (33029)	Human microbiome	DMA00027	
<i>Anaerococcus lactolyticus</i> (33032)	Human microbiome	DMA00028	
<i>Anaerococcus prevotii</i> (33034)	Human microbiome	DMA00029	
<i>Anaeroglobus geminatus</i> (156456)	Human microbiome	DMA00030	
<i>Anaerostipes caccae</i> (105841)	Human microbiome	DMA00031	

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Anaerotruncus colihominis</i> (169435)	Human microbiome	DMA00032	
<i>Aliarcobacter butzleri</i> (28197)	Foodborne pathogens, MDR	DMA00033	
<i>Arcobacter skirrowii</i> (28200)	Gastrointestinal infections	DMA00034	
<i>Lancefieldella parvula</i> (1382)	Human microbiome	DMA00037	Yes
<i>Lancefieldella rimae</i> (1383)	Human microbiome	DMA00038	Yes
<i>Fannyhessea vaginae</i> (82135)	Human microbiome	DMA00039	Yes
<i>Bacillus anthracis</i> (1392)	Human pathogens	DMA00040	Yes
<i>Bacillus cereus</i> (1396)	Probiotics, Food production, Infectious diseases	DMA00041	Yes
<i>Bacillus licheniformis</i> (1402)	Food production, Infectious diseases	DMA00042	Yes
<i>Bacillus subtilis</i> (1423)	Probiotics, Gastrointestinal infections	DMA00043	Yes
<i>Bacteroides caccae</i> (47678)	Human microbiome	DMA00044	Yes
<i>Phocaeicola coprocola</i> (310298)	Human microbiome	DMA00045	
<i>Phocaeicola coprophilus</i> (387090)	Human microbiome	DMA00046	
<i>Phocaeicola dorei</i> (357276)	Human microbiome	DMA00047	
<i>Bacteroides eggerthii</i> (28111)	Human microbiome	DMA00048	
<i>Bacteroides fragilis</i> (817)	Human microbiome	DMA00049	Yes
<i>Bacteroides intestinalis</i> (329854)	Human microbiome	DMA00050	Yes
<i>Bacterioides</i> sp. 4_3_47FAA (457394)	Human microbiome	DMA00055	
<i>Bacteroides stercoris</i> (46506)	Human pathogens	DMA00056	
<i>Bacteroides thetaiotaomicron</i> (818)	Human microbiome	DMA00057	Yes
<i>Campylobacter ureolyticus</i> (827)	Gastrointestinal infections	DMA00058	
<i>Phocaeicola vulgatus</i> (821)	Gastrointestinal infections	DMA00059	Yes
<i>Bifidobacterium adolescentis</i> (1680)	Human microbiome, Probiotics	DMA00060	Yes
<i>Bifidobacterium bifidum</i> (1681)	Human microbiome, Probiotics	DMA00061	Yes
<i>Bifidobacterium breve</i> (1685)	Human microbiome, Probiotics	DMA00062	Yes
<i>Bifidobacterium dentium</i> (1689)	Human microbiome	DMA00063	Yes
<i>Bifidobacterium longum</i> (216816)	Human microbiome, Probiotics	DMA00064	Yes
<i>Bifidobacterium pseudocatenulatum</i> (28026)	Human microbiome	DMA00065	Yes
<i>Bifidobacterium scardovii</i> (158787)	Human microbiome	DMA00066	Yes
<i>Blautia hydrogenotrophica</i> (53443)	Human microbiome	DMA00067	
<i>Bordetella parapertussis</i> (519), <i>Bordetella bronchiseptica</i> (518), <i>Bordetella pertussis</i> (520), <i>Bordetella holmesii</i> (35814)	Human pathogens	DMA00068	

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Brevibacillus agri</i> (51101)	Human pathogens	DMA00069	
<i>Brevibacillus brevis</i> (1393)	Infectious diseases	DMA00070	
<i>Brevibacterium casei</i> (33889)	Food production, Infectious diseases	DMA00071	
<i>Brevundimonas diminuta</i> (293)	Infectious diseases	DMA00072	
<i>Brevundimonas vesicularis</i> (41276)	Infectious diseases	DMA00073	
<i>Burkholderia cepacia</i> (292)	Human pathogens	DMA00074	
<i>Burkholderia gladioli</i> (28095)	Food production, Infectious diseases	DMA00075	
<i>Burkholderia mallei</i> (13373)	Infectious diseases	DMA00076	
<i>Butyrivibrio pullicaecorum</i> (501571)	Human microbiome	DMA00077	
<i>Butyrivibrio crossotus</i> (45851)	Human microbiome	DMA00078	
<i>Butyrivibrio fibrisolvens</i> (831)	Human microbiome	DMA00079	
<i>Campylobacter coli</i> (195)	Gastrointestinal infections	DMA00080	Yes
<i>Campylobacter concisus</i> (199)	Human microbiome	DMA00081	Yes
<i>Campylobacter fetus</i> (196)	Food production, Infectious diseases	DMA00082	Yes
<i>Campylobacter gracilis</i> (824)	Gastrointestinal infections	DMA00083	Yes
<i>Campylobacter jejuni</i> (197)	Gastrointestinal infections	DMA00084	Yes
<i>Campylobacter rectus</i> (203)	Infectious diseases	DMA00085	Yes
<i>Campylobacter showae</i> (204)	Human microbiome	DMA00086	Yes
<i>Campylobacter sputorum</i> (206)	Food production, Human microbiome	DMA00087	Yes
<i>Campylobacter upsaliensis</i> (28080)	Gastrointestinal infections	DMA00088	Yes
<i>Capnocytophaga gingivalis</i> (1017)	Human microbiome	DMA00094	
<i>Capnocytophaga granulosa</i> (45242)	Human microbiome	DMA00095	
<i>Capnocytophaga ochracea</i> (1018)	Human microbiome	DMA00096	
<i>Capnocytophaga sputigena</i> (1019)	Human microbiome	DMA00097	
<i>Cardiobacterium hominis</i> (2718)	Human microbiome, Infectious diseases	DMA00098	
<i>Catellibacillus marimammalium</i> (300419)	Human microbiome	DMA00099	
<i>Catenibacterium mitsuokai</i> (100886)	Human microbiome	DMA00100	
<i>Catonella morbi</i> (43997)	Human microbiome	DMA00101	
<i>Chlamydia trachomatis</i> (813)	Infectious diseases	DMA00102	
<i>Chlamydia pneumoniae</i> (83558)	Infectious diseases	DMA00103	
<i>Chlamydia psittaci</i> (83554)	Infectious diseases	DMA00104	
<i>Citrobacter freundii</i> (546)	Human microbiome, Wastewater, Food production	DMA00105	

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Citrobacter youngae</i> (133448)	Infectious diseases	DMA00106	
<i>Clostridioides difficile</i> (1496)	MDR, Sepsis, Infectious diseases, Wastewater	DMA00107	Yes
<i>Tyzzzeria nexilis</i> (29361)	Human microbiome	DMA00108	
<i>Clostridium perfringens</i> (1502)	Human pathogens	DMA00109	Yes
<i>Clostridium septicum</i> (1504)	Human pathogens	DMA00110	
<i>Paeniclostridium sordellii</i> (1505)	Infectious diseases	DMA00111	
<i>Clostridium</i> sp. M62/1 (411486)	Human microbiome	DMA00112	Yes
<i>Clostridium</i> sp. SS2/1 (411484)	Human microbiome	DMA00113	Yes
<i>Clostridium tetani</i> (1513)	Human pathogens	DMA00114	Yes
<i>Collinsella aerofaciens</i> (74426)	Human microbiome	DMA00115	
<i>Coprococcus comes</i> (410072)	Human microbiome	DMA00116	
<i>Coprococcus eutactus</i> (33043)	Human microbiome	DMA00117	
<i>Corynebacterium aurimucosum</i> (169292)	Human microbiome; Infectious diseases	DMA00118	Yes
<i>Corynebacterium diphtheriae</i> (1717)	Human pathogens	DMA00119	Yes
<i>Corynebacterium durum</i> (61592)	Human microbiome	DMA00120	Yes
<i>Corynebacterium matruchotii</i> (43768)	Human microbiome	DMA00121	Yes
<i>Corynebacterium pseudodiphtheriticum</i> (37637)	Human microbiome, Infectious diseases	DMA00122	Yes
<i>Coxiella burnetii</i> (777)	Human pathogens, Infectious diseases	DMA00123	
<i>Desulfovibrio desulfuricans</i> (876)	Infectious diseases	DMA00124	
<i>Desulfovibrio piger</i> (901)	Human microbiome	DMA00125	
<i>Desulfovibrio vulgaris</i> (881)	Human microbiome	DMA00126	
<i>Dialister invisus</i> (218538)	Human microbiome	DMA00127	
<i>Dialister pneumosintes</i> (39950)	Infectious diseases	DMA00128	
<i>Dorea formicigenerans</i> (39486)	Human microbiome	DMA00129	
<i>Eggerthella sinensis</i> (242230)	Human pathogens	DMA00130	
<i>Ehrlichia canis</i> (944)	Animal pathogens	DMA00131	
<i>Eikenella corrodens</i> (539)	Human microbiome	DMA00132	
<i>Elizabethkingia meningoseptica</i> (238)	Infectious diseases	DMA00133	
<i>Enterobacter cloacae</i> (550)	Infectious diseases, Wastewater, MDR	DMA00134	Yes
<i>Enterococcus casseliflavus</i> (37734)	Infectious diseases	DMA00135	Yes
<i>Enterococcus faecalis</i> (1351)	Probiotics, Wastewater, Gastrointestinal infections	DMA00136	Yes
<i>Enterococcus faecium</i> (1352)	Probiotics, Infectious diseases, Sepsis	DMA00137	Yes

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Enterococcus italicus</i> (246144)	Food production	DMA00138	Yes
<i>Erysipelothrix rhusiopathiae</i> (1648)	Food production	DMA00139	
<i>Escherichia coli</i> (562)	Human microbiome, Wastewater	DMA00140	Yes
<i>Anaerobutyricum hallii</i> (39488)	Human microbiome	DMA00141	Yes
<i>Eubacterium infirmum</i> (56774)	Human microbiome	DMA00142	Yes
<i>Eubacterium rectale</i> (39491)	Human microbiome	DMA00143	Yes
<i>Lachnoanaerobaculum saburreum</i> (467210)	Human microbiome	DMA00144	
<i>Eubacterium siraeum</i> (39492)	Human microbiome	DMA00145	
<i>Eubacterium ventriosum</i> (39496)	Human microbiome	DMA00146	Yes
<i>Exiguobacterium aurantiacum</i> (33987)	Infectious diseases	DMA00147	
<i>Faecalibacterium prausnitzii</i> (853)	Human microbiome	DMA00148	Yes
<i>Filifactor alocis</i> (143361)	Human microbiome, Human pathogens	DMA00149	
<i>Finegoldia magna</i> (1260)	Human microbiome	DMA00150	Yes
<i>Francisella tularensis</i> (263)	Food production	DMA00151	
<i>Fusobacterium mortiferum</i> (850)	Human microbiome	DMA00152	Yes
<i>Fusobacterium necrophorum</i> (859)	Human microbiome, Infectious diseases	DMA00153	Yes
<i>Fusobacterium nucleatum</i> (851)	Human microbiome	DMA00154	Yes
<i>Fusobacterium periodonticum</i> (860)	Human microbiome, Infectious diseases	DMA00155	Yes
<i>Fusobacterium varium</i> (856)	Human microbiome	DMA00156	Yes
<i>Gardnerella vaginalis</i> (553190)	Human microbiome, Infectious diseases	DMA00157	Yes
<i>Gemella bergeri</i> (84136)	Infectious diseases	DMA00158	
<i>Gemella haemolysans</i> (1379)	Human microbiome	DMA00159	
<i>Gemella morbillorum</i> (29391)	Infectious diseases	DMA00160	
<i>Geobacillus stearothermophilus</i> (1422)	Food production	DMA00161	
<i>Granulicatella adiacens</i> (46124)	Infectious diseases	DMA00162	
<i>Granulicatella elegans</i> (137732)	Human microbiome, Infectious diseases	DMA00163	
<i>Haemophilus ducreyi</i> (730)	Human pathogens, Infectious diseases	DMA00164	Yes
<i>Haemophilus influenzae</i> (727)	Human microbiome, Infectious diseases, sepsis	DMA00165	Yes
<i>Haemophilus parainfluenzae</i> (729)	Human microbiome, Infectious diseases, Sepsis	DMA00166	Yes
<i>Hafnia alvei</i> (569)	Human microbiome, Food production	DMA00167	
<i>Helicobacter cinaedi</i> (213)	Infectious diseases	DMA00168	Yes
<i>Helicobacter fennelliae</i> (215)	Infectious diseases	DMA00169	Yes

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Helicobacter pylori</i> (210)	Infectious diseases	DMA00170	Yes
<i>Inquilinus limosus</i> (171674), <i>Inquilinus ginsengisoli</i> (363840)	Human pathogens	DMA00171	
<i>Kingella denitrificans</i> (502)	Human pathogens, Infectious diseases	DMA00172	
<i>Kingella kingae</i> (504)	Infectious diseases	DMA00173	
<i>Klebsiella granulomatis</i> (39824)	Human pathogens	DMA00174	Yes
<i>Rothia kristinae</i> (37923)	Human microbiome	DMA00175	
<i>Lachnobacterium bovis</i> (140626)	Food production	DMA00176	
<i>Lactobacillus acidophilus</i> (1579)	Probiotics, Human microbiome, Food production	DMA00177	Yes
<i>Lactocaseibacillus casei</i> (1582)	Probiotics, Human microbiome, Food production	DMA00178	Yes
<i>Lactobacillus crispatus</i> (47770)	Probiotics, Human microbiome, Food production	DMA00179	Yes
<i>Lactobacillus delbrueckii</i> (1584)	Probiotics, Human microbiome, Food production	DMA00180	
<i>Limosilactobacillus fermentum</i> (1613)	Probiotics, Human microbiome, Food production	DMA00181	
<i>Lactobacillus gasseri</i> (1596)	Probiotics, Human microbiome, Food production	DMA00182	
<i>Lactobacillus iners</i> (147802)	Probiotics, Human microbiome, Food production	DMA00183	Yes
<i>Lactobacillus jensenii</i> (109790)	Human microbiome	DMA00184	
<i>Lactiplantibacillus plantarum</i> (1590)	Probiotics, Human microbiome	DMA00185	Yes
<i>Lactocaseibacillus rhamnosus</i> (47715)	Probiotics, Human microbiome, Food production	DMA00186	
<i>Ligilactobacillus salivarius</i> (1624)	Human microbiome	DMA00187	
<i>Limosilactobacillus vaginalis</i> (1633)	Human microbiome	DMA00188	Yes
<i>Lactococcus garvieae</i> (1363)	Food production	DMA00189	
<i>Lactococcus lactis</i> (1358)	Probiotics, Human microbiome, Food production	DMA00190	
<i>Lautropia mirabilis</i> (47671)	Human microbiome, Infectious diseases	DMA00191	
<i>Legionella pneumophila</i> (446)	Infectious diseases	DMA00192	Yes
<i>Leifsonia aquatica</i> (144185)	Infectious diseases	DMA00193	
<i>Leptospira interrogans</i> (173)	Human pathogens, Infectious diseases	DMA00194	Yes
<i>Sneathia vaginalis</i> (187101)	Human microbiome	DMA00195	
<i>Leptotrichia buccalis</i> (40542)	Human microbiome	DMA00196	
<i>Pseudoleptotrichia goodfellowii</i> (157692)	Human microbiome	DMA00197	
<i>Leptotrichia wadei</i> (157687)	Human microbiome	DMA00198	
<i>Listeria monocytogenes</i> (1639)	Infectious diseases, Food production, Human pathogens	DMA00199	Yes

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Lysinibacillus fusiformis</i> (28031)	Infectious diseases, Sepsis	DMA00200	
<i>Massilia timonae</i> (47229)	Infectious diseases, Human pathogens	DMA00201	
<i>Megasphaera micronuciformis</i> (187326)	Infectious diseases, Human pathogens	DMA00202	
<i>Megasphaera</i> sp. DJF_B143 (537288)	Food production	DMA00203	
<i>Methylobacterium fujisawaense</i> (107400)	Infectious diseases	DMA00204	
<i>Methylobacterium mesophilicum</i> (39956)	Infectious diseases	DMA00205	
<i>Methylobacterium zatmanii</i> (29429)	Human microbiome, Infectious diseases	DMA00206	
<i>Microbacterium binotii</i> (462710)	Human microbiome, Infectious diseases	DMA00207	
<i>Micrococcus luteus</i> (1270)	Human microbiome, Environmental microbe	DMA00208	
<i>Mitsuokella multacida</i> (52226)	Human microbiome	DMA00209	
<i>Mobiluncus curtisii</i> (2051)	Human microbiome	DMA00210	Yes
<i>Mobiluncus mulieris</i> (2052)	Human microbiome, Infectious diseases	DMA00211	Yes
<i>Mogibacterium timidum</i> (35519)	Human microbiome	DMA00212	
<i>Moraxella catarrhalis</i> (480)	Human pathogens	DMA00213	Yes
<i>Moraxella lacunata</i> (477)	Human pathogens	DMA00214	Yes
<i>Morganella morganii</i> (582)	Human microbiome, Infectious diseases	DMA00215	
<i>Mycobacterium tuberculosis variant africanum</i> (33894)	Human pathogens	DMA00216	
<i>Mycobacterium avium</i> (1764)	Human pathogens, Infectious diseases, MDR	DMA00217	
<i>Mycobacteroides chelonae</i> (1774)	Wastewater, Infectious diseases	DMA00218	
<i>Mycobacterium intracellulare</i> (1767)	Human pathogens	DMA00219	
<i>Mycobacterium kansasii</i> (1786)	Human pathogens	DMA00220	
<i>Mycobacterium tuberculosis</i> (1773)	Human pathogens	DMA00221	Yes
<i>Mycoplasma genitalium</i> (2097)	Human pathogen, Infectious diseases	DMA00222	Yes
<i>Mycoplasma hominis</i> (2098)	Human pathogen, Infectious diseases	DMA00223	Yes
<i>Mycoplasma orale</i> (2121)	Human microbiome	DMA00224	
<i>Mycoplasma pneumoniae</i> (2104)	Infectious diseases	DMA00225	Yes
<i>Neisseria bacilliformis</i> (267212)	Human pathogens, Infectious diseases	DMA00226	
<i>Neisseria elongata</i> (495)	Infectious diseases	DMA00227	
<i>Neisseria flavescens</i> (484)	Human microbiome, Infectious diseases	DMA00228	
<i>Neisseria gonorrhoeae</i> (485)	Infectious diseases	DMA00229	Yes
<i>Neisseria lactamica</i> (486)	Human microbiome	DMA00230	
<i>Neisseria meningitidis</i> (487)	Human pathogens	DMA00231	Yes

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Neisseria mucosa</i> (488)	Human microbiome, Infectious diseases	DMA00232	Yes
<i>Neisseria sicca</i> (490)	Human microbiome, Infectious diseases	DMA00233	
<i>Neisseria subflava</i> (28449)	Human microbiome	DMA00234	
<i>Neorickettsia risticii</i> (950)	Animal pathogens	DMA00235	
<i>Nocardia asteroides</i> (1824)	Human pathogens, Infectious diseases	DMA00236	
<i>Nocardia farcinica</i> (37329)	Infectious diseases	DMA00237	
<i>Nocardioides</i> sp. NS/27 (223904)	Environmental microbes	DMA00238	
<i>Novosphingobium</i> sp. K39 (233904)	Environmental microbes	DMA00239	
<i>Brucella anthropi</i> (529)	Environmental microbes, Infectious diseases	DMA00240	
<i>Oribacterium sinus</i> (237576)	Infectious diseases	DMA00241	
<i>Paenibacillus larvae</i> (1464)	Animal pathogens	DMA00242	
<i>Paenibacillus macerans</i> (44252)	Environmental microbes	DMA00243	
<i>Paenibacillus thiaminolyticus</i> (49283)	Infectious diseases	DMA00244	
<i>Pantoea ananatis</i> (553)	Infectious diseases	DMA00245	
<i>Pasteurella multocida</i> (747)	Human pathogens	DMA00251	
<i>Pediococcus acidilactici</i> (1254)	Probiotics, Human microbiome	DMA00252	
<i>Pediococcus pentosaceus</i> (1255)	Food production, Fermentation and degradation	DMA00253	
<i>Peptoniphilus asaccharolyticus</i> (1258)	Human microbiome, Infectious diseases	DMA00254	
<i>Peptostreptococcus anaerobius</i> (1261)	Human microbiome, Infectious diseases	DMA00255	
<i>Peptostreptococcus stomatis</i> (341694)	Human microbiome, Infectious diseases	DMA00256	
<i>Plesiomonas shigelloides</i> (703)	Human pathogens, Infectious diseases	DMA00257	Yes
<i>Porphyromonas asaccharolytica</i> (28123)	Infectious diseases	DMA00259	
<i>Porphyromonas endodontalis</i> (28124)	Infectious diseases	DMA00260	
<i>Porphyromonas gingivalis</i> (837)	Infectious diseases	DMA00261	
<i>Prevotella bivia</i> (28125)	Human pathogens, Infectious diseases	DMA00262	Yes
<i>Prevotella buccalis</i> (28127)	Human microbiome, Infectious diseases	DMA00263	
<i>Prevotella copri</i> (165179)	Human microbiome, Infectious diseases	DMA00264	
<i>Prevotella denticola</i> (28129)	Human microbiome, Fermentation and degradation	DMA00265	
<i>Prevotella disiens</i> (28130)	Human microbiome, Infectious diseases	DMA00266	Yes
<i>Prevotella intermedia</i> (28131)	Human microbiome, Infectious diseases	DMA00267	
<i>Prevotella loescheii</i> (840)	Human microbiome, Infectious diseases	DMA00268	
<i>Prevotella melaninogenica</i> (28132)	Human microbiome, Human pathogens	DMA00269	

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Prevotella nigrescens</i> (28133)	Infectious diseases	DMA00270	
<i>Prevotella oralis</i> (28134)	Human microbiome, Infectious diseases	DMA00271	Yes
<i>Prevotella oris</i> (28135)	Human microbiome, Infectious diseases	DMA00272	
<i>Alloprevotella tanneriae</i> (76122)	Human microbiome	DMA00273	
<i>Prevotella veroralis</i> (28137)	Human microbiome	DMA00274	
<i>Cutibacterium acnes</i> (1747)	Human microbiome	DMA00275	
<i>Arachnia propionica</i> (1750)	Human microbiome	DMA00276	
<i>Pseudomonas aeruginosa</i> (287)	Infectious diseases, MDR	DMA00278	Yes
<i>Pseudomonas putida</i> (303)	Biocontrol, Fermentation and degradation	DMA00279	Yes
<i>Pseudomonas straminea</i> (47882)	Environmental microbes	DMA00280	Yes
<i>Pseudoramibacter alactolyticus</i> (113287)	Infectious diseases	DMA00281	
<i>Rahnella aquatilis</i> (34038)	Infectious diseases, Sepsis	DMA00282	
<i>Ralstonia pickettii</i> (329)	Environmental microbes	DMA00283	
<i>Rhodococcus hoagii</i> (43767)	Human pathogens, Infectious diseases	DMA00284	
<i>Rothia dentocariosa</i> (2047)	Human microbiome	DMA00285	
<i>Rothia mucilaginosa</i> (43675)	Human microbiome, Infectious diseases	DMA00286	
<i>Ruminococcus bromii</i> (40518)	Human microbiome	DMA00287	
<i>Ruminococcus gnavus</i> (33038)	Human microbiome	DMA00288	
<i>Blautia obeum</i> (40520)	Human microbiome	DMA00289	
<i>Ruminococcus torques</i> (33039)	Human microbiome	DMA00290	
<i>Salmonella enterica</i> (28901)	Human pathogens	DMA00291	Yes
<i>Selenomonas infelix</i> (135082)	Human pathogens, Human microbiome	DMA00292	
<i>Selenomonas noxia</i> (135083)	Human microbiome, Infectious diseases	DMA00293	
<i>Selenomonas sputigena</i> (69823)	Human microbiome, Infectious diseases	DMA00294	
<i>Shigella dysenteriae</i> (622)	Human pathogens	DMA00295	Yes
<i>Shuttleworthia satellites</i> (177972)	Human microbiome	DMA00296	
<i>Sneathia sanguinegens</i> (40543)	Human microbiome	DMA00297	
<i>Solobacterium moorei</i> (102148)	Infectious diseases, Sepsis	DMA00298	
<i>Sphingomonas paucimobilis</i> (13689)	Human pathogens, Infectious diseases	DMA00299	
<i>Sphingomonas bisphenolicum</i> (296544)	Fermentation and degradation	DMA00300	
<i>Sporobacter termitidis</i> (44749)	Environmental microbes, Fermentation and degradation	DMA00301	
<i>Staphylococcus aureus</i> (1280)	Human pathogens, Infectious diseases	DMA00302	Yes

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Staphylococcus caprae</i> (29380)	Human microbiome, Infectious diseases	DMA00303	Yes
<i>Staphylococcus epidermidis</i> (1282)	Sepsis, MDR	DMA00304	Yes
<i>Staphylococcus saprophyticus</i> (29385)	Infectious diseases	DMA00305	
<i>Stenotrophomonas maltophilia</i> (40324)	Infectious diseases, MDR	DMA00306	
<i>Streptobacillus moniliformis</i> (34105)	Infectious diseases	DMA00307	
<i>Streptococcus agalactiae</i> (1311)	Infectious diseases	DMA00308	
<i>Streptococcus anginosus</i> (1328)	Human microbiome, Infectious diseases	DMA00309	
<i>Streptococcus australis</i> (113107)	Human microbiome	DMA00310	
<i>Streptococcus constellatus</i> (76860)	Human microbiome	DMA00311	
<i>Streptococcus downei</i> (1317)	Human microbiome, Infectious diseases	DMA00312	
<i>Streptococcus gordonii</i> (1302)	Human microbiome	DMA00313	
<i>Streptococcus infantis</i> (68892)	Human pathogens, Human microbiome	DMA00314	
<i>Streptococcus mitis</i> (28037)	Human microbiome, Infectious diseases	DMA00315	Yes
<i>Streptococcus mutans</i> (1309)	Human microbiome	DMA00316	
<i>Streptococcus oralis</i> (1303)	Human microbiome	DMA00317	Yes
<i>Streptococcus pneumoniae</i> (1313)	Human pathogens, Infectious diseases	DMA00318	Yes
<i>Streptococcus pyogenes</i> (1314)	Human pathogens, Infectious diseases	DMA00319	Yes
<i>Streptococcus salivarius</i> (1304)	Human microbiome, Probiotics	DMA00320	Yes
<i>Streptococcus sanguinis</i> (1305)	Human microbiome, Infectious diseases	DMA00321	
<i>Streptococcus sinensis</i> (176090)	Infectious diseases	DMA00322	
<i>Streptococcus suis</i> (1307)	Food production	DMA00323	
<i>Streptomyces bikiniensis</i> (1896)	Environmental microbes, Biocontrol	DMA00324	
<i>Streptomyces griseus</i> (1911)	Environmental microbes, Biocontrol	DMA00325	
<i>Streptomyces somaliensis</i> (78355)	Human pathogens	DMA00326	
<i>Subdoligranulum variabile</i> (214851)	Human microbiome	DMA00327	
<i>Tannerella forsythia</i> (28112)	Infectious diseases	DMA00328	
<i>Treponema denticola</i> (158)	Human pathogens, Infectious diseases	DMA00329	
<i>Treponema pallidum</i> (160)	Human pathogens	DMA00330	
<i>Treponema socranskii</i> (53419)	Infectious diseases	DMA00331	
<i>Trichomonas vaginalis</i> (5722)	Human pathogens, Infectious diseases	DMA00332	Yes
<i>Turicibacter sanguinis</i> (154288)	Human pathogens	DMA00333	
<i>Ureaplasma parvum</i> (134821)	Human microbiome	DMA00334	

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Ureaplasma urealyticum</i> (2130)	Human pathogens	DMA00335	
<i>Varibaculum cambriense</i> (184870)	Infectious diseases	DMA00336	
<i>Veillonella dispar</i> (39778)	Human microbiome, Infectious diseases	DMA00337	
<i>Veillonella parvula</i> (29466)	Human microbiome, Infectious diseases	DMA00338	
<i>Vibrio alginolyticus</i> (663)	Human pathogens, Infectious diseases	DMA00339	
<i>Vibrio cholerae</i> (666)	Human pathogens, Infectious diseases	DMA00340	Yes
<i>Vibrio parahaemolyticus</i> (670)	Environmental microbes, Infectious diseases	DMA00341	Yes
<i>Vibrio vulnificus</i> (672)	Environmental microbes	DMA00342	Yes
<i>Weissella confusa</i> (1583)	Environmental microbes, Biocontrol, Fermentation and degradation	DMA00343	
<i>Yersinia enterocolitica</i> (630)	Human pathogens	DMA00344	Yes
<i>Yersinia pestis</i> (632)	Human pathogens	DMA00345	Yes
Bacteria (2)	Bacterial load	DMA00347	Yes
Bacteria (2)	Bacterial load	DMA00348	Yes
<i>Campylobacter</i> (194)	Infectious diseases, Food production, Human pathogens	DMA00355	Yes
<i>Salmonella enterica subsp. enterica</i> (59201)	Human pathogens, Infectious diseases	DMA00360	Yes
<i>Shigella sonnei</i> (624)	Gastrointestinal infections	DMA00361	Yes
<i>Legionella longbeachae</i> (450)	Environmental microbes, Infectious diseases	DMA00363	Yes
<i>Klebsiella pneumoniae</i> (573)	Human pathogens, Infectious diseases	DMA00367	Yes
<i>Thermoactinomyces</i> (2023)	Environmental microbes, Infectious diseases, Food production	DMA00370	
<i>Lactobacillus brevis</i> (1580)	Probiotics	DMA00381	
<i>Lentilactobacillus buchneri</i> (1581)	Probiotics, Food production, Biocontrol	DMA00382	
<i>Loigolactobacillus coryniformis</i> (1610)	Probiotics	DMA00383	
<i>Latilactobacillus curvatus</i> (28038)	Probiotics	DMA00384	
<i>Fructilactobacillus lindneri</i> (53444)	Probiotics, Fermentation and degradation	DMA00385	
<i>Megasphaera cerevisiae</i> (39029)	Food production	DMA00386	
<i>Pectinatus cerevisiiphilus</i> (86956)	Food production	DMA00387	
<i>Pectinatus frisingensis</i> (865)	Food production	DMA00388	
<i>Pediococcus damnosus</i> (51663)	Food production	DMA00389	
<i>Scardovia wiggisiae</i> (230143)	Infectious diseases	DMA00399	
<i>Streptococcus sobrinus</i> (1310)	Infectious diseases	DMA00400	
<i>Bordetella pertussis</i> (520)	Human pathogens	DMA00401	Yes

Target species (NCBI taxonomy ID)	Application field	GeneGlobe catalog number	Wet-lab validated
<i>Bordetella parapertussis</i> (519)	Human pathogens	DMA00402	Yes
<i>Blautia coccooides</i> (1532)	Human microbiome	DMA00404	Yes
<i>Megasphaera genomsp. type_1</i> (699192)	Human microbiome, Infectious diseases, Human pathogens	DMA00405	
<i>Megasphaera genomsp. type_2</i> (699193)	Human microbiome, Infectious diseases, Human pathogens	DMA00406	
<i>Gardnerella vaginalis</i> (2702)	Human microbiome, Infectious diseases	DMA00408	
<i>Mageeibacillus indolicus</i> (884684)	Human microbiome	DMA00409	
<i>Mycoplasma hominis</i> (2098)	Human pathogens, Infectious diseases	DMA00410	
<i>Prevotella</i> (838)	Human microbiome, Infectious diseases	DMA00411	
<i>Peptostreptococcus sp.</i> (1257)	Human microbiome, Infectious diseases, MDR	DMA00412	
<i>Mobiluncus</i> (2050)	Human microbiome, Infectious diseases	DMA00413	
<i>Mycobacteroides abscessus</i> (36809)	Infectious diseases, MDR	DMA00414	
<i>Mycolicibacterium fortuitum</i> (1766)	Infectious diseases	DMA00415	
<i>Staphylococcus lugdunensis</i> (28035)	Human microbiome, Infectious diseases	DMA00416	
<i>Mycobacteroides chelonae</i> (1774)	Wastewater, Infectious diseases	DMA00417	
<i>Enterococcus faecalis</i> (1351)	Probiotics, Wastewater, Infectious diseases	DMA00446	Yes
<i>Klebsiella aerogenes</i> (548)	Infectious diseases	DMA00448	Yes
<i>Enterobacter cloacae</i> (550)	Infectious diseases, Wastewater, MDR	DMA00449	Yes
<i>Proteus mirabilis</i> (584)	Infectious diseases	DMA00474	
<i>Aerococcus urinae</i> (1376)	Infectious diseases	DMA00475	
<i>Oxalobacter formigenes</i> (847)	Human microbiome, probiotics	DMA00490	
<i>Methanobrevibacter smithii</i> (2173)	Human microbiome	DMA00491	
<i>Cronobacter</i> (413496)	Food production, Infectious diseases	DMA00694	Yes
<i>Listeria</i> (1637)	Infectious diseases, Food production, Human pathogens	DMA00695	Yes
<i>Escherichia coli</i> (562)	Human microbiome, Wastewater	DMA00696	Yes
<i>Escherichia coli</i> (562)	Human microbiome, Wastewater	DMA00697	Yes
<i>Escherichia coli</i> (562)	Human microbiome, Wastewater	DMA00698	Yes
<i>Escherichia coli</i> (562)	Human microbiome, Wastewater	DMA00699	Yes
<i>Salmonella</i> (590)	Human pathogens, Wastewater, Food production	DMA00704	Yes
<i>Legionella</i> (445)	Environmental microbes, Infectious diseases	DMA00705	Yes
<i>Legionella pneumophila</i> (446)	Environmental microbes, Infectious diseases	DMA00706	Yes
<i>Listeria grayi</i> (1641)	Probiotics, Food production, Environmental microbes	DMA00707	

Table 2. Fungal identification targets/assays

Target species (NCBI taxonomy ID)	GeneGlobe catalog number	Wet-lab validated
<i>Aspergillus flavus</i> (5059)	DMA00035	
<i>Aspergillus fumigatus</i> (746128)	DMA00036	Yes
<i>Candida albicans</i> (5476)	DMA00089	Yes
<i>Candida glabrata</i> (5478)	DMA00090	Yes
<i>Pichia kudriavzevii</i> (4909)	DMA00091	Yes
<i>Candida parapsilosis</i> (5480)	DMA00092	Yes
<i>Candida tropicalis</i> (5482)	DMA00093	Yes
<i>Pneumocystis jirovecii</i> (42068)	DMA00258	
<i>Aspergillus</i> (5052), <i>Candida</i> (1535326)	DMA00346	Yes
<i>Aspergillus niger</i> (5061)	DMA00365	Yes
<i>Mucor hiemalis</i> (64493)	DMA00368	Yes
<i>Aspergillus</i> (5052), <i>Penicillium</i> (5073)	DMA00369	Yes
<i>Aspergillus flavus</i> (5059)	DMA00398	Yes
<i>Candida dubliniensis</i> (42374)	DMA00407	Yes
<i>Trichophyton rubrum</i> (5551)	DMA00450	
<i>Enterocytozoon hepatopenaei</i> (646526)	DMA00451	
<i>Microsporum audouinii</i> (34393)	DMA00460	
<i>Microsporum canis</i> (63405)	DMA00461	
<i>Trichophyton tonsurans</i> (34387)	DMA00462	
<i>Trichophyton interdigitale</i> (101480)	DMA00463	
<i>Trichophyton mentagrophytes</i> (523103)	DMA00464	
<i>Trichophyton verrucosum</i> (63417)	DMA00465	
<i>Sarocladium strictum</i> (5046)	DMA00476	Yes
<i>Aspergillus terreus</i> (33178)	DMA00477	Yes
<i>Epidermophyton floccosum</i> (34391)	DMA00478	
<i>Fusarium solani</i> (169388)	DMA00479	
<i>Neoscytalidium dimidiatum</i> (108428)	DMA00480	
<i>Alternaria alternata</i> (5599)	DMA00481	
<i>Aspergillus versicolor</i> (46472)	DMA00482	Yes
<i>Curvularia lunata</i> (5503)	DMA00483	
<i>Scopulariopsis brevicaulis</i> (561152)	DMA00484	

Target species (NCBI taxonomy ID)	GeneGlobe catalog number	Wet-lab validated
<i>Aspergillus terreus</i> (33178)	DMA00489	Yes
Fungi (4751)	DMA00391	Yes
Fungi (4751)	DMA00393	Yes
Fungi (4751)	DMA00394	Yes

Table 3. Parasite identification targets/assays

Target species (NCBI taxonomy ID)	Taxonomy	GeneGlobe catalog number	Wet-lab validated
<i>Cryptosporidium hominis</i> (237895), <i>Cryptosporidium parvum</i> (5807), <i>Cryptosporidium cuniculus</i> (564424)	Alveolata	DMA00356	Yes
<i>Entamoeba histolytica</i> (5759)	Amoebozoa	DMA00358	Yes
<i>Endolimax nana</i> (110788)	Amoebozoa	DMA00468	
<i>Entamoeba muris</i> (110766)	Amoebozoa	DMA00469	Yes
<i>Bos taurus</i> (9913)	Eukaryotes	DMA00403	
<i>Dientamoeba fragilis</i> (43352)	Excavata	DMA00357	
<i>Giardia intestinalis</i> (5741)	Metamonada	DMA00359	Yes
<i>Pentatrichomonas hominis</i> (5728)	Metamonada	DMA00471	
<i>Rodentolepis nana</i> (102285)	Metazoa	DMA00362	
<i>Trichuris trichiura</i> (36087)	Metazoa	DMA00364	
<i>Enterobius vermicularis</i> (51028)	Metazoa	DMA00366	
<i>Ancylostoma duodenale</i> (51022)	Metazoa	DMA00466	
<i>Ascaris lumbricoides</i> (6252)	Metazoa	DMA00467	
<i>Necator americanus</i> (51031)	Metazoa	DMA00470	
<i>Blastocystis hominis</i> (12968)	Stramenopiles	DMA00354	
<i>Cryptosporidium hominis</i> (237895), <i>Cryptosporidium parvum</i> (5807), <i>Cryptosporidium cuniculus</i> (564424)	Alveolata	DMA00356	Yes

Table 4. Viral identification targets/assays

Target species (NCBI taxonomy ID)	GeneGlobe catalog number	Wet-lab validated
Adenovirus (10535)	DMA00371	Yes
Human metapneumovirus (162145)	DMA00372	Yes
Influenza A virus (11320)	DMA00373	Yes
Influenza B virus (11520)	DMA00374	Yes

Target species (NCBI taxonomy ID)	GeneGlobe catalog number	Wet-lab validated
Human parainfluenza 1 virus (12730)	DMA00375	Yes
Human orthorubulavirus 2 (2560525)	DMA00376	Yes
Human parainfluenza 3 (11216)	DMA00377	Yes
Human rhinovirus sp. (169066)	DMA00378	Yes
Human respiratory syncytial virus (12814)	DMA00379	Yes
Human herpesvirus 1 (10298)	DMA00395	
Human herpesvirus 2 (10310)	DMA00396	
Human herpesvirus 3 (10335)	DMA00397	
Gill associated virus genotype 2 (557593)	DMA00418	
Hepatopancreatic parvovirus (139034)	DMA00419	
Decapod penstyldensovirus 1 (1513224)	DMA00420	
Penaeid shrimp infectious myonecrosis virus (282786)	DMA00421	
Laem Singh virus (691504)	DMA00422	
Mourilyan virus (325212)	DMA00423	
Baculovirus penaei (384357)	DMA00424	
Spawner-isolated mortality virus (207679)	DMA00425	
Laem Singh virus (691504)	DMA00422	
Mourilyan virus (325212)	DMA00423	
Baculovirus penaei (384357)	DMA00424	
Spawner-isolated mortality virus (207679)	DMA00425	
Taura syndrome virus (142102)	DMA00426	
White spot syndrome virus (342409)	DMA00427	
Yellow head virus (96029)	DMA00428	
Yellow head virus (96029)	DMA00429	
Human coronavirus 229E (11137)	DMA00430	
Human coronavirus OC43 (31631)	DMA00431	
Human coronavirus HKU1 (290028)	DMA00452	
Human coronavirus NL63 (277944)	DMA00453	
Human orthorubulavirus 4 (2560526)	DMA00454	Yes
West Nile virus (11082)	DMA00455	
Bocaparvovirus (1507401)	DMA00456	
Mayaro virus (59301)	DMA00457	

Target species (NCBI taxonomy ID)	GeneGlobe catalog number	Wet-lab validated
Yellow fever virus (11089)	DMA00458	
Oropouche virus (118655)	DMA00459	
Norovirus GI (122928)	DMA00472	Yes
Norovirus GII (122929)	DMA00473	Yes
Human astrovirus 1 (12456)	DMA00485	
Saprovirus (1906670)	DMA00486	
Enterovirus (12059)	DMA00487	Yes
Human rotavirus A (10941)	DMA00488	Yes
Human coronavirus SARS-CoV-2 (2697049)	DMA00710	
Human coronavirus SARS-CoV-2 (2697049)	DMA00711	
Influenza A (11320)	DMA00712	
Influenza A (11320)	DMA00713	
Influenza B (11520)	DMA00714	
Human respiratory syncytial virus (12814)	DMA00715	

Table 5. Antibiotic resistance gene detection targets/assays

Antibiotic resistance gene	Target info	GeneGlobe catalog number	Wet-lab validated
<i>aac(6)-Ib (1)</i>	Bacterial fluoroquinolone-acetylating aminoglycoside 6'-N-acetyltransferase AAC(6)-Ib-cr5 gene	DMA00492	
<i>aacC1</i>	Bacterial AAC(3)-I family aminoglycoside 3-N-acetyltransferase gene	DMA00493	
<i>aacC2</i>	Bacterial aminoglycoside N-acetyltransferase AAC(3)-Iid gene	DMA00494	
<i>aacC4</i>	Bacterial aminoglycoside N-acetyltransferase AAC(3)-Iva gene	DMA00495	
<i>aadA1</i>	Bacterial ANT(3'')-Ia family aminoglycoside nucleotidyltransferase AadA1 gene	DMA00496	
<i>aadB</i>	Bacterial aminoglycoside nucleotidyltransferase ANT(2'')-Ia gene	DMA00497	
<i>aphA6</i>	Bacterial aminoglycoside O-phosphotransferase APH(3')-Via gene	DMA00498	
<i>mecA</i>	Bacterial PBP2a family beta-lactam-resistant peptidoglycan transpeptidase gene MecA	DMA00499	Yes
<i>BES-1</i>	Bacterial class A extended spectrum beta-lactamase BES-1 gene	DMA00500	Yes
<i>BIC-1</i>	Bacterial carbapenem-hydrolyzing class A beta-lactamase BIC-1 gene	DMA00501	
CTX-M-1 group	Bacterial class A extended-spectrum beta-lactamase CTX-M-15 gene	DMA00502	Yes
CTX-M-8 group	Bacterial extended-spectrum beta-lactamase CTX-M-8 gene	DMA00503	

Antibiotic resistance gene	Target info	GeneGlobe catalog number	Wet-lab validated
CTX-M-9 group	Bacterial class A extended-spectrum beta-lactamase CTX-M-9 gene	DMA00504	
GES-1	Bacterial class A extended-spectrum beta-lactamase GES-1 gene	DMA00505	Yes
IMI & NMC-A	Bacterial carbapenem-hydrolysing class A beta-lactamase NmcA gene	DMA00506	
KPC-1	Bacterial carbapenem-hydrolyzing class A beta-lactamase KPC-2 gene	DMA00507	
Per-1 group	Bacterial class A extended-spectrum beta-lactamase PER-1	DMA00508	Yes
Per-2 group	Bacterial class A extended-spectrum beta-lactamase PER-14 gene	DMA00509	
SFC-1	Bacterial carbapenem-hydrolyzing class A beta-lactamase SFC-1 gene	DMA00510	
SFO-1	Bacterial class A extended-spectrum beta-lactamase SFO-1 gene	DMA00511	
SHV-1	Bacterial class A broad-spectrum beta-lactamase SHV-1 gene	DMA00512	
SHV(156D)	Bacterial SHV family beta-lactamase gene	DMA00513	
SHV(156G)	Bacterial SHV family beta-lactamase gene	DMA00514	
SHV(238G240E)	Bacterial class A broad-spectrum beta-lactamase SHV-11 gene	DMA00515	
SHV(238G240K)	Bacterial class A broad-spectrum beta-lactamase SHV-11 gene	DMA00516	
SHV(238S240E)	Bacterial class A broad-spectrum beta-lactamase SHV-11 gene	DMA00517	
SHV(238S240K)	Bacterial class A broad-spectrum beta-lactamase SHV-11 gene	DMA00518	
SME-1	Bacterial SME family beta-lactamase gene	DMA00519	
TLA-1	Bacterial class A extended-spectrum beta-lactamase TLA-1 gene	DMA00520	
VEB	Bacterial class A beta-lactamase VEB gene	DMA00521	Yes
ccrA	Bacterial subclass B1 metallo-beta-lactamase CfiA gene	DMA00522	
IMP-1 group	Bacterial class B beta-lactamase IMP-1 gene	DMA00523	Yes
IMP-12 group	Bacterial class B1 metallo-beta-lactamase IMP-12 gene	DMA00524	
IMP-2 group	Bacterial subclass B1 metallo-beta-lactamase IMP-2	DMA00525	
IMP-5 group	Bacterial subclass B1 metallo-beta-lactamase IMP-5	DMA00526	
NDM	Bacterial subclass B1 metallo-beta-lactamase NDM-1 gene	DMA00527	Yes
blaVIM-1 group	Bacterial subclass B1 metallo-beta-lactamase VIM1 gene	DMA00528	Yes
blaVIM-13	Bacterial subclass B1 metallo-beta-lactamase VIM-13 gene	DMA00529	
blaVIM-7	Bacterial subclass B1 metallo-beta-lactamase VIM-7 gene	DMA00530	

Antibiotic resistance gene	Target info	GeneGlobe catalog number	Wet-lab validated
ACC-1 group	Bacterial cephalosporin-hydrolyzing class C beta-lactamase ACC-1 gene	DMA00531	Yes
ACC-3 group	Bacterial AMPC cephalosporinase precursor protein ACC-3 gene	DMA00532	
ACT 5/7 group	Bacterial cephalosporin-hydrolyzing class C beta-lactamase ACT-5 gene	DMA00533	
ACT-1 group	Bacterial cephalosporin-hydrolyzing class C beta-lactamase ACT-1 gene	DMA00534	
CFE-1	Bacterial CMY-2 family cephalosporin-hydrolyzing class C beta-lactamase CFE-1 gene	DMA00535	Yes
CMY-10 group	Bacterial CMY-1/MOX family class C beta-lactamase MOX-14 gene	DMA00536	
<i>dha</i>	Bacterial class C beta-lactamase DHA-1 gene	DMA00537	Yes
<i>fox</i>	Bacterial cephalosporin-hydrolyzing class C beta-lactamase FOX gene	DMA00538	Yes
LAT-1	Bacterial CMY-2 family cephalosporin-hydrolyzing class C beta-lactamase LAT-1 gene	DMA00539	
MIR-1	Bacterial cephalosporin-hydrolyzing class C beta-lactamase MIR-1 gene	DMA00540	
<i>bla</i> MOX-1	Bacterial CMY-1/MOX family class C beta-lactamase MOX-1 gene	DMA00541	
OXA-10 group	Bacterial oxacillin-hydrolyzing class D beta-lactamase OXA-10 gene	DMA00542	Yes
OXA-18	Bacterial class D extended-spectrum beta-lactamase OXA-18 gene	DMA00543	
OXA-2 group	Bacterial OXA-2 family class D beta-lactamase OXA-2 gene	DMA00544	
OXA-23 group	Bacterial OXA-23 family carbapenem-hydrolyzing class D beta-lactamase OXA-967 gene	DMA00545	Yes
OXA-24 group	Bacterial carbapenem-hydrolyzing class D beta-lactamase OXA-24 gene	DMA00546	
OXA-45	Bacterial oxacillin-hydrolyzing class D extended-spectrum beta-lactamase OXA-45 gene	DMA00547	
OXA-48 group	Bacterial OXA-48 family class D beta-lactamase OXA-1055 gene	DMA00548	Yes
OXA-50 group	Bacterial OXA-50 family oxacillin-hydrolyzing class D beta-lactamase OXA-50 gene	DMA00549	
OXA-51 group	Bacterial OXA-51 family carbapenem-hydrolyzing class D beta-lactamase OXA-51 gene	DMA00550	
OXA-54	Bacterial OXA-48 family carbapenem-hydrolyzing class D beta-lactamase OXA-54 gene	DMA00551	
OXA-55	Bacterial carbapenem-hydrolyzing class D beta-lactamase OXA-55 gene	DMA00552	
OXA-58 group	Bacterial carbapenem-hydrolyzing class D beta-lactamase OXA-58 gene	DMA00553	Yes
OXA-60	Bacterial carbapenem-hydrolyzing class D beta-lactamase OXA-60 gene	DMA00554	
OXA-62	Bacterial carbapenem-hydrolyzing class D beta-lactamase OXA-62 gene	DMA00555	
<i>ereB</i>	Bacterial EreB family erythromycin esterase gene	DMA00556	Yes
QepA	Bacterial fluoroquinolone efflux MFS transporter QepA1 gene	DMA00557	Yes

Antibiotic resistance gene	Target info	GeneGlobe catalog number	Wet-lab validated
<i>QnrA</i>	Bacterial quinolone resistance pentapeptide repeat protein QnrA1 gene	DMA00558	Yes
<i>QnrB-1</i> group	Bacterial quinolone resistance pentapeptide repeat protein QnrB1 gene	DMA00559	Yes
<i>QnrB-31</i> group	Bacterial quinolone resistance pentapeptide repeat protein QnrB31 gene	DMA00560	
<i>QnrB-4</i> group	Bacterial quinolone resistance pentapeptide repeat protein QnrB4 gene	DMA00561	
<i>QnrB-5</i> group	Bacterial quinolone resistance pentapeptide repeat protein QnrB5 gene	DMA00562	
<i>QnrB-8</i> group	Bacterial quinolone resistance pentapeptide repeat protein QnrB8 gene	DMA00563	
<i>QnrC</i>	Bacterial QnrC family quinolone resistance pentapeptide repeat protein gene	DMA00564	
<i>QnrD</i>	Bacterial quinolone resistance pentapeptide repeat protein QnrD1 gene	DMA00565	
<i>QnrS</i>	Bacterial quinolone resistance pentapeptide repeat protein QnrS1 gene	DMA00566	Yes
<i>ermA</i>	Bacterial 23S rRNA (adenine(2058)-N(6))-methyltransferase Erm(A) gene	DMA00567	Yes
<i>ermB</i>	Bacterial adenine(2058)-N(6))-dimethyltransferase Erm(B) gene	DMA00568	Yes
<i>ermC</i>	Bacterial erythromycin resistance protein ErmC gene	DMA00569	
<i>mefA</i>	Bacterial macrolide efflux MFS transporter (<i>mefA</i>) gene	DMA00570	
<i>msrA</i>	Bacterial ABC-F type ribosomal protection protein Msr(A) gene	DMA00571	
<i>oprJ</i>	Bacterial multidrug efflux transporter outer membrane subunit OprJ gene	DMA00572	Yes
<i>oprM</i>	Bacterial multidrug efflux RND transporter outer membrane channel subunit OprM gene	DMA00573	Yes
<i>tetA</i>	Bacterial tetracycline efflux MFS transporter Tet(A) gene	DMA00574	Yes
<i>tetB</i>	Bacterial tetracycline efflux MFS transporter Tet(B) gene	DMA00575	Yes
<i>vanB</i>	Bacterial D-alanine--(R)-lactate ligase VanB gene	DMA00576	Yes
<i>vanC</i>	Bacterial D-alanine--D-serine ligase VanC1 gene	DMA00577	Yes
<i>vanA</i> (VRE)	Bacterial D-alanine--(R)-lactate ligase VanA gene	DMA00578	
<i>aac(6)-Ib</i> (2)	Bacterial aminoglycoside N-acetyltransferase AAC(6)-Ib4 gene	DMA00579	Yes
<i>ant-1a</i>	Bacterial aminoglycoside nucleotidyltransferase ANT(2'')-1a gene	DMA00580	
<i>aph(3)</i>	Bacterial APH(3)-VI family aminoglycoside O-phosphotransferase gene	DMA00581	
<i>dfra17</i>	Bacterial trimethoprim-resistant dihydrofolate reductase DfrA17 gene	DMA00582	
<i>fosA</i> (<i>Klebsiella</i> sp.)	Bacterial FosA family fosfomycin resistance glutathione transferase gene	DMA00583	Yes
<i>fosA</i> (<i>Pseudomonas</i> sp.)	Bacterial FosA family fosfomycin resistance glutathione transferase gene	DMA00584	Yes
<i>OqxA</i>	Bacterial multidrug efflux transporter periplasmic adaptor subunit OqxA gene	DMA00585	Yes

Antibiotic resistance gene	Target info	GeneGlobe catalog number	Wet-lab validated
OqxB	Bacterial multidrug efflux RND transporter permease subunit OqxB gene	DMA00586	
sul1	Bacterial quaternary ammonium compound efflux SMR transporter QacE delta 1 gene	DMA00587	Yes
sul2	Bacterial sulfonamide-resistant dihydropteroate synthase Sul2 gene	DMA00588	
TEM	Bacterial class A broad-spectrum beta-lactamase TEM-1 gene	DMA00589	Yes
tetM	Bacterial tetracycline resistance ribosomal protection protein Tet(M) gene	DMA00590	
<i>E. coli gyrA (S83L)</i>	Bacterial DNA topoisomerase (ATP-hydrolyzing) subunit A (<i>gyrA</i>) gene	DMA00591	
<i>E. coli gyrA (S83W)</i>	Bacterial DNA topoisomerase (ATP-hydrolyzing) subunit A (<i>gyrA</i>) gene	DMA00592	
tetS	Bacterial tetracycline resistance ribosomal protection protein Tet(S) gene	DMA00593	
vanA	Bacterial D-alanine--(R)-lactate ligase VanA gene	DMA00594	

Table 6. Virulence factor gene detection targets/assays

Virulence gene	Target info	GeneGlobe catalog number	Wet-lab validated
<i>aatA</i>	Bacterial outer membrane protein (<i>aatA</i>) gene	DMA00595	
<i>ace (E. faecalis)</i>	Bacterial collagen-binding MSCRAMM adhesin Ace gene	DMA00596	Yes
<i>ace (V. cholerae)</i>	Bacterial accessory cholera enterotoxin gene	DMA00597	Yes
<i>ail</i>	Bacterial attachment invasion locus protein gene	DMA00598	
<i>aslA</i>	Bacterial arylsulfatase <i>aslA</i> gene	DMA00599	
<i>badA</i>	Bacterial trimeric autotransporter adhesin BapA gene	DMA00600	
<i>bepB</i>	Bacterial T4SS effector adenyllyltransferase BepC gene	DMA00601	
<i>bsh</i>	Bacterial linear amide C-N hydrolase gene	DMA00602	
<i>chuS</i>	Bacterial heme heme-forming heme oxygenase ChuS gene	DMA00603	
<i>cloSI</i>	Bacterial alpha-clostripain gene	DMA00604	
<i>clpB</i>	Bacterial type VI secretion system ATPase TssH gene	DMA00605	
<i>clpC</i>	Bacterial ATP-dependent Clp protease ATP-binding subunit gene	DMA00606	
<i>cpsL</i>	Bacterial capsular polysaccharide repeat unit transporter <i>cpsL</i> gene	DMA00607	
<i>CT456</i>	Bacterial translocated actin-recruiting phosphoprotein gene	DMA00608	
<i>ctxA</i>	Bacterial cholera enterotoxin catalytic subunit CtxA gene	DMA00609	
<i>eae</i>	Bacterial intimin type gamma protein gene	DMA00610	
<i>efaA</i>	Bacterial metal ABC transporter substrate-binding protein gene	DMA00611	Yes

Virulence gene	Target info	GeneGlobe catalog number	Wet-lab validated
<i>Enterotoxigenic E. coli</i> , LT	E. coli heat-labile enterotoxin LT subunit B gene	DMA00612	
<i>Enterotoxigenic E. coli</i> , ST	E. coli heat-stable toxin I (estA1) gene	DMA00613	
<i>fimH</i>	Bacterial type 1 fimbriae D-mannose specific adhesin FimH gene	DMA00614	Yes
<i>flaB</i>	Bacterial flagellin B gene	DMA00615	
<i>fleN</i>	Bacterial flagellar synthesis regulator FleN gene	DMA00616	
<i>flgG</i>	Bacterial flagellar hook protein FlgE gene	DMA00617	
<i>flgK</i>	Bacterial flagellar hook-associated protein FlgK gene	DMA00618	
<i>flhA</i>	Bacterial flagellar biosynthesis protein FlhA gene	DMA00619	
<i>fliA</i>	Bacterial flagellar biosynthesis sigma factor fliA gene	DMA00620	
<i>fliC2</i>	Bacterial flagellin fliC2 gene	DMA00621	
<i>fliF</i>	Bacterial flagellar M-ring protein FliF gene	DMA00622	
<i>fliG</i>	Bacterial flagellar motor switch protein FliG gene	DMA00623	
<i>fliN</i>	Bacterial flagellar motor switch protein FliN gene	DMA00624	
<i>babA (H. pylori)</i>	Bacterial adhesin-binding fucosylated histo-blood group antigen <i>babB</i> gene	DMA00625	
<i>cagA (H. pylori)</i>	Bacterial cytotoxin-associated protein A (<i>cagA</i>) gene	DMA00626	
<i>dupA (H. pylori)</i>	Bacterial duodenal ulcer-promoting protein <i>dupA</i> gene	DMA00627	
<i>iceA (H. pylori)</i>	Bacterial ulcer-associated restriction endonuclease protein <i>iceA</i> gene	DMA00628	
<i>vacA (H. pylori)</i>	Bacterial autotransporter vacuolating cytotoxin <i>VacA</i> gene	DMA00629	Yes
<i>virB (H. pylori)</i>	Bacterial P-type DNA transfer ATPase <i>VirB11</i> gene	DMA00630	
<i>virD (H. pylori)</i>	Bacterial sodium-calcium antiporter <i>virD</i> gene	DMA00631	
<i>hap</i>	Bacterial autotransporter outer membrane beta-barrel domain-containing protein gene	DMA00632	
<i>hla</i>	Bacterial alpha-hemolysin <i>hla</i> gene	DMA00633	
<i>hlyB</i>	Bacterial sphingomyelinase <i>hlyB</i> gene	DMA00634	
<i>hlyE</i>	Bacterial gamma-hemolysin component B (<i>hlyE</i>) gene	DMA00635	Yes
<i>hlyN</i>	Bacterial bi-component gamma-hemolysin <i>HlyN</i> subunit C gene	DMA00636	
<i>hsp70</i>	Bacterial molecular chaperone GroEL (<i>hsp70</i>) gene	DMA00637	
<i>iap</i>	Bacterial invasion associated endopeptidase (<i>iap</i>) gene	DMA00638	
<i>icmK</i>	Bacterial intracellular multiplication protein (<i>IcmK</i>) gene	DMA00639	
<i>inlA</i>	Bacterial internalin A gene	DMA00640	
<i>inv</i>	Bacterial invasin <i>Inv</i> gene	DMA00641	
<i>invA</i>	Bacterial type III secretion system export apparatus protein <i>InvA</i> gene	DMA00642	Yes

Virulence gene	Target info	GeneGlobe catalog number	Wet-lab validated
<i>ipaH</i>	Bacterial invasion plasmid antigen <i>ipaH</i> gene	DMA00643	
<i>iucA</i>	Bacterial aerobactin siderophore biosynthesis protein <i>iucA</i> gene	DMA00644	
<i>iucB</i>	Bacterial aerobactin siderophore biosynthesis protein <i>iucB</i> gene	DMA00645	
<i>iucC</i>	Bacterial aerobactin synthase <i>iucC</i> gene	DMA00646	
<i>iucD</i>	Bacterial L-lysine N6-monooxygenase <i>iucD</i> gene	DMA00647	
<i>iutA</i>	Bacterial ferric aerobactin receptor <i>iutA</i> gene	DMA00648	
<i>lasI</i>	Bacterial acyl-homoserine-lactone synthase <i>LasI</i> gene	DMA00649	
<i>lbpA</i>	Bacterial lactoferrin/transferrin family TonB-dependent receptor gene	DMA00650	
<i>lepA</i>	Bacterial interaptin <i>lepA</i> gene	DMA00651	
<i>lukF</i>	Bacterial Panton-Valentine bi-component leukocidin subunit F gene	DMA00652	
<i>lytA</i>	Bacterial autolysin (N-acetylmuramoyl-L-alanine amidase) (Mureinhydrolase, Mucopolysaccharide aminohydrolase, Cell wall hydrolase) gene	DMA00653	
<i>mbtA</i>	Bacterial bifunctional salicyl-AMP ligase/salicyl-S-ArCP synthetase <i>mbtA</i> gene	DMA00654	
<i>mbtD</i>	Bacterial mycobactin polyketide synthase <i>MbtD</i> gene	DMA00655	
<i>mbtE</i>	Bacterial non-ribosomal peptide synthetase <i>mbtE</i> gene	DMA00656	
<i>neuC</i>	Bacterial UDP-N-acetylglucosamine 2-epimerase <i>neuC</i> gene	DMA00657	
<i>oipA</i>	Bacterial outer inflammatory protein <i>OipA</i> gene	DMA00658	
<i>phoP</i>	Bacterial two-component system response regulator <i>PhoP</i> gene	DMA00659	Yes
<i>pilG</i>	Bacterial pilus assembly protein <i>PilG</i> gene	DMA00660	
<i>pirA/pirB</i>	Bacterial toxin <i>pirA/pirB</i> gene	DMA00661	
<i>pkn5</i>	Chlamydia serine/threonine protein kinase gene	DMA00662	
<i>plcA</i>	Bacterial 1-phosphatidylinositol phosphodiesterase gene	DMA00663	
<i>ply</i>	Bacterial pneumolysin (<i>ply</i>) gene	DMA00664	Yes
<i>psaA</i>	Bacterial adhesin <i>PsaA</i> gene	DMA00665	
<i>psaB</i>	Bacterial chaperone protein <i>PsaB</i> gene	DMA00666	
<i>psaC</i>	Bacterial fimbrial biogenesis usher protein <i>PsaC</i> gene	DMA00667	
<i>ptxA</i>	Bacterial pertussis toxin ADP-ribosyltransferase subunit <i>PtxA</i> gene	DMA00668	Yes
<i>rpoS</i>	Bacterial serine/threonine protein kinase gene	DMA00669	
<i>slo</i>	Bacterial cholesterol-dependent cytolysin streptolysin O <i>slo</i> gene	DMA00670	
<i>spa</i>	Bacterial staphylococcal protein A <i>spa</i> gene	DMA00671	

Virulence gene	Target info	GeneGlobe catalog number	Wet-lab validated
<i>spaA</i>	Bacterial isopeptide-forming domain-containing fimbrial protein gene	DMA00672	
<i>spaB</i>	Bacterial carboxypeptidase regulatory-like domain-containing protein gene	DMA00673	
<i>spaO</i>	Bacterial SPI-1 type III secretion system protein SpaO gene	DMA00674	
<i>spaP</i>	Bacterial SPI-1 type III secretion system export apparatus protein SpaP gene	DMA00675	
<i>speB</i>	Bacterial cysteine proteinase exotoxin SpeB gene	DMA00676	
<i>stx1B</i>	Bacterial shiga toxin Stx1a subunit B gene	DMA00677	Yes
<i>stx2A</i>	Bacterial shiga toxin Stx2c subunit A gene	DMA00678	Yes
<i>stxA</i>	Bacterial shiga toxin Stx1 subunit A gene	DMA00679	Yes
<i>stxB</i>	Bacterial shiga toxin Stx1a subunit B gene	DMA00680	Yes
<i>tbpA</i>	Bacterial lactoferrin/transferrin family TonB-dependent receptor gene	DMA00681	
<i>tcdA</i>	Bacterial toxin A (tcdA) gene	DMA00682	
<i>tcdB</i>	Bacterial glycosylating toxin TcdB gene	DMA00683	
<i>ureA</i>	Bacterial urease subunit alpha ureA gene	DMA00684	
<i>ureI</i>	Bacterial acid-activated urea channel ureI gene	DMA00685	
<i>vasH</i>	Bacterial sigma-54 dependent transcriptional regulator VasH gene	DMA00686	
<i>waaC</i>	Bacterial lipopolysaccharide heptosyltransferase I waaC gene	DMA00687	
<i>wbkA</i>	Bacterial glycosyltransferase family 4 protein gene	DMA00688	Yes
<i>wzt</i>	Bacterial ABC transporter ATP-binding protein gene	DMA00689	
<i>ybiT</i>	Bacterial yersiniabactin biosynthesis thioesterase YbiT gene	DMA00690	
YE2522	Bacterial flagellin A gene	DMA00691	
<i>ystA</i>	Bacterial enterotoxin ystA gene	DMA00692	
<i>zot</i>	Bacterial zonula occludens toxin ZOT gene	DMA00693	

Ordering Information

Product	Contents	Cat. no.
dPCR Microbial DNA Detection Assays	One tube Microbial DNA dPCR Assay, 200 rxn for 40 µl reaction in Nanoplate 26k, 666 rxn for 12 µl reaction for Nanoplate 8.5k	250207*
	10 QIAcuity Nanoplates 26k 24-well, 11 Nanoplate Seals	250001
QIAcuity Probe PCR Kit (1 ml, 5 ml, 25 ml)	1 ml, 5 ml, or 25 ml Master Mix for the QIAcuity dPCR instrument; water	250101 250102 250103
QIAcuity OneStep Advanced Probe Kit (1 ml, 5 ml)	1 ml or 5 ml OneStep Master Mix for the QIAcuity dPCR instrument, RT Mix, Internal Control RNA, Enhancer GC, water	250131 250132

* For the respective Assay ID, see the tables above; full assay cat. no. will be available after dye configuration.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

Trademarks: QIAGEN®, Sample to Insight®, QIAcuity®, GeneGlobe® (QIAGEN Group).

Registered names, trademarks, etc. used in this document, even when not specifically marked as such, may still be protected by law.

© 2022 QIAGEN, all rights reserved. PROM-20556-001 1127549 04/2022