

Microbial DNA qPCR Array

Oral Disease

Cat. no. 330261 BAID-1904ZRA

For real-time PCR-based, application-specific microbial identification or profiling

The Oral Disease Microbial DNA qPCR Array is a research tool used for screening or relative profiling of microorganisms found in dental plaque and saliva. Two major oral diseases are dental caries (tooth decay) and gingivitis. Both diseases are quite common, with 90% prevalence in adults. If left untreated, both diseases increase in severity, resulting in endodontic infections from dental caries, and periodontitis from gingivitis. The oral microbial communities are thought to play a large role in both diseases, although the direct causative effects are largely unknown. Specific bacterial species are now associated with each disease. However, these bacterial species are also found in the normal mouth, but show a higher population in diseased mouths. Comparisons of the relative populations of each bacterial species are essential to understand interactions of these bacterial communities and oral disease.

Assays were designed using the 16S rRNA gene as the target, and use PCR amplification primers and hydrolysis-probe detection, which increases the specificity of each assay. Each Microbial DNA qPCR Array plate analyzes one sample at a time. Pan-bacteria assays that detect a broad range of bacterial species are included to serve as positive controls for the presence of bacterial DNA, and the Positive PCR Control assay is included to test for the presence of PCR inhibitors or the efficiency of the polymerase chain reaction. The arrays are provided with the appropriate Microbial qPCR Mastermix and Microbial DNA-Free Water. The simplicity of the product format and operating procedure allow routine and reliable screening of oral disease associated bacterial species from samples in any research laboratory with access to a real-time PCR instrument.



Format	For use with the following real-time cyclers
Format A, with fluorescein	Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2
Format A, with ROX	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well blocks); Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®
Format C, with ROX	Applied Biosystems models 7500 (Fast, 96-well block), 7900HT (Fast, 96-well block), StepOnePlus™, ViiA 7 (Fast, 96-well block)
Format D, with ROX	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
Format E, with ROX	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
Format F, with ROX	Roche® LightCycler® 480 (96-well block)
Format G, with ROX	Roche LightCycler 480 (384-well block)

Shipping and storage

Microbial DNA qPCR Arrays are shipped at ambient temperature or on blue ice packs. For long-term storage, keep plates at –20°C. Ensure that you have the correct Microbial DNA qPCR Array format for your real-time cycler (see table above). Microbial qPCR Mastermixes are shipped on blue ice packs. For long-term storage, keep Microbial qPCR Mastermixes at –20°C. Microbial DNA-Free Water is shipped at ambient temperature or on blue ice packs. If unopened, Microbial DNA-Free Water can be stored at room temperature or at –20°C. If tube is opened, store Microbial DNA-Free Water at –20°C. Discard tube of Microbial DNA-Free Water if opened three times and use fresh tube of Microbial DNA-Free Water for future experiments.

Note: Ensure that you have the correct Microbial qPCR Mastermixes, with the correct reference dye if required, for your instrument.

Note: Open the package and store the products appropriately immediately upon receipt.

Assay Table

Position	Species (NCBI Tax ID)/Gene	NCBI Tax ID	Antibiotic classification / Gene Description	May detect (species) / Also detect (antibiotic resistance genes) / Associated species (virulence factor genes)	Sensitivity	Assay Catalog #
A01	<i>Abiotrophia defectiva</i>	46125			20	BPID00001A
A02	<i>Actinomyces gerencseriae</i>	52769			50	BPID00009A
A03	<i>Actinomyces israelii</i>	1659			20	BPID00011A
A04	<i>Actinomyces naeslundii</i>	1655			20	BPID00013A
A05	<i>Actinomyces odontolyticus</i>	1660			100	BPID00014A
A06	<i>Actinomyces viscosus</i>	1656			40	BPID00018A
A07	<i>Aggregatibacter actinomycetemcomitans</i>	714		<i>Bibersteinia trehalosi</i> (47735)	100	BPID00024A
A08	<i>Anaeroglobus geminatus</i>	156456			30	BPID00032A
A09	<i>Atopobium parvulum</i>	1382			100	BPID00039A
A10	<i>Atopobium rimae</i>	1383			100	BPID00040A
A11	<i>Bifidobacterium dentium</i>	1689			40	BPID00066A
A12	<i>Campylobacter concisus</i>	199			20	BPID00084A
B01	<i>Campylobacter gracilis</i>	824		<i>Campylobacter rectus</i> (203)	30	BPID00086A
B02	<i>Campylobacter rectus</i>	203		<i>Campylobacter fetus</i> (196)	20	BPID00088A
B03	<i>Campylobacter showae</i>	204			100	BPID00089A
B04	<i>Capnocytophaga gingivalis</i>	1017			20	BPID00097A
B05	<i>Capnocytophaga granulosa</i>	45242			20	BPID00098A
B06	<i>Capnocytophaga ochracea</i>	1018			20	BPID00099A
B07	<i>Capnocytophaga sputigena</i>	1019			20	BPID00100A
B08	<i>Catonella morbi</i>	43997			20	BPID00104A
B09	<i>Corynebacterium matruchotii</i>	43768			40	BPID00124A
B10	<i>Dialister invisus</i>	218538			30	BPID00130A
B11	<i>Dialister pneumosintes</i>	39950			20	BPID00131A
B12	<i>Eikenella corrodens</i>	539			100	BPID00136A
C01	<i>Enterococcus gallinarum</i> (1353) <i>Enterococcus casseliflavus</i>	1353			20	BPID00141A
C02	<i>Enterococcus faecalis</i>	1351			30	BPID00142A
C03	<i>Escherichia fergusonii</i> (564), <i>Shigella boydii</i> (621), <i>Shigella sonnei</i> (624), <i>Shigella dysenteriae</i> (622), <i>Shigella flexneri</i> (623) <i>Escherichia coli</i>	623		<i>Escherichia albertii</i> (208962), <i>Enterobacter aerogenes</i> (548), <i>Enterobacter cloacae</i> (550), <i>Serratia marcescens</i> (615)	30	BPID00146A
C04	<i>Eubacterium infirmum</i>	56774			20	BPID00148A
C05	<i>Filifactor alocis</i>	143361			30	BPID00155A
C06	<i>Fusobacterium nucleatum</i>	851			30	BPID00160A
C07	<i>Fusobacterium periodonticum</i>	860			40	BPID00161A
C08	<i>Gemella haemolysans</i>	1379			20	BPID00165A
C09	<i>Gemella morbillorum</i>	29391			20	BPID00166A
C10	<i>Granulicatella adiacens</i>	46124			100	BPID00168A
C11	<i>Granulicatella elegans</i>	137732			40	BPID00169A
C12	<i>Haemophilus influenzae</i>	727		<i>Haemophilus haemolyticus</i> (726)	20	BPID00171A
D01	<i>Lactobacillus acidophilus</i>	1579		<i>Lactobacillus helveticus</i> (1587)	200	BPID00184A
D02	<i>Lactobacillus fermentum</i>	1613			30	BPID00188A
D03	<i>Lactobacillus gasseri</i>	1596			50	BPID00189A
D04	<i>Lactobacillus paracasei</i> (1597), <i>Lactobacillus zeae</i> (57037)	1582			20	BPID00185A

Position	Species (NCBI Tax ID)/Gene	NCBI Tax ID	Antibiotic classification / Gene Description	May detect (species) / Also detect (antibiotic resistance genes) / Associated species (virulence factor genes)	Sensitivity	Assay Catalog #
	Lactobacillus casei					
D05	Lactobacillus vaginalis	1633		Lactobacillus coelestis(181675), Lactobacillus reuteri(1598)	100	BPID00197A
D06	Lactococcus lactis	1358			20	BPID00199A
D07	Lautropia mirabilis	47671			20	BPID00200A
D08	Leptotrichia buccalis	40542			30	BPID00205A
D09	Leptotrichia wadei	157687			100	BPID00207A
D10	Megasphaera micronuciformis	187326			20	BPID00211A
D11	Mogibacterium timidum	35519			30	BPID00221A
D12	Neisseria bacilliformis	267212			100	BPID00235A
E01	Neisseria flavescens	484		Neisseria subflava(28449), Neisseria flava(34026)	50	BPID00238A
E02	Neisseria meningitidis	487		Neisseria cinerea(483), Neisseria gonorrhoeae(485)	300	BPID00241A
E03	Neisseria mucosa	488			50	BPID00242A
E04	Neisseria sicca	490			50	BPID00243A
E05	Neisseria subflava	28449		Neisseria flava(34026)	50	BPID00244A
E06	Parvimonas micra	33033			100	BPID00260A
E07	Peptostreptococcus anaerobius	1261			30	BPID00265A
E08	Peptostreptococcus stomatis	341694		Peptostreptococcus anaerobius(1261)	50	BPID00266A
E09	Porphyromonas endodontalis	28124			100	BPID00270A
E10	Porphyromonas gingivalis	837			30	BPID00271A
E11	Prevotella denticola	28129			20	BPID00275A
E12	Prevotella intermedia	28131			30	BPID00277A
F01	Prevotella loescheii	840			20	BPID00278A
F02	Prevotella melaninogenica	28132			20	BPID00279A
F03	Prevotella nigrescens	28133			20	BPID00280A
F04	Prevotella oralis	28134			20	BPID00281A
F05	Prevotella oris	28135			20	BPID00282A
F06	Prevotella veroralis	28137			20	BPID00284A
F07	Propionibacterium acnes	1747			20	BPID00285A
F08	Propionibacterium propionicum	1750			100	BPID00286A
F09	Pseudomonas aeruginosa	287			30	BPID00288A
F10	Pseudoramibacter alactolyticus	113287			20	BPID00292A
F11	Rothia aerea(172042) Rothia dentocariosa	2047			30	BPID00296A
F12	Rothia mucilaginosa	43675			30	BPID00297A
G01	Selenomonas infelix	135082			20	BPID00303A
G02	Selenomonas noxia	135083			20	BPID00304A
G03	Selenomonas sputigena	69823			20	BPID00305A
G04	Shuttleworthia satelles	177972			20	BPID00308A
G05	Solobacterium moorei	102148			20	BPID00310A
G06	Streptococcus anginosus	1328			30	BPID00321A
G07	Streptococcus australis	113107		Streptococcus infantis(68892)	20	BPID00322A
G08	Streptococcus intermedius(1338) Streptococcus constellatus	1338			20	BPID00323A
G09	Streptococcus gordonii	1302		Streptococcus anginosus(1328)	200	BPID00325A
G10	Streptococcus infantis	68892		Streptococcus cristatus(45634),Streptococcus oralis(1303),Streptococcus pneumoniae(1313), Streptococcus pseudopneumoniae(257758), Streptococcus salivarius(1304)	20	BPID00326A
				Streptococcus infantis(68892),		

Position	Species (NCBI Tax ID)/Gene	NCBI Tax ID	Antibiotic classification / Gene Description	May detect (species) / Also detect (antibiotic resistance genes) / Associated species (virulence factor genes)	Sensitivity	Assay Catalog #
G11	<i>Streptococcus mitis</i>	28037		<i>Streptococcus oralis</i> (1303), <i>Streptococcus pneumoniae</i> (1313), <i>Streptococcus porcinus</i> (1340), <i>Streptococcus pseudopneumoniae</i> (257758)	100	BPID00327A
G12	<i>Streptococcus mutans</i>	1309			400	BPID00328A
H01	<i>Streptococcus pneumoniae</i>	1313		<i>Streptococcus infantis</i> (68892), <i>Streptococcus oralis</i> (1303), <i>Streptococcus pseudopneumoniae</i> (257758), <i>Streptococcus mitis</i> (28037)	20	BPID00331A
H02	<i>Streptococcus thermophilus</i> (1308) <i>Streptococcus salivarius</i>	1304			100	BPID00333A
H03	<i>Streptococcus sanguinis</i>	1305		<i>Streptococcus pseudopneumoniae</i> (257758)	50	BPID00334A
H04	<i>Streptococcus pneumoniae</i> (1313), <i>Streptococcus infantis</i> (68892) <i>Streptococcus oralis</i>	1303		<i>Streptococcus equi</i> (1336), <i>Streptococcus pseudopneumoniae</i> (257758), <i>Streptococcus mitis</i> (28037)	40	BPID00329A
H05	<i>Tannerella forsythia</i>	28112			40	BPID00341A
H06	<i>Treponema denticola</i>	158			20	BPID00342A
H07	<i>Treponema socranskii</i>	53419			30	BPID00344A
H08	<i>Veillonella dispar</i>	39778			100	BPID00350A
H09	<i>Veillonella parvula</i>	29466		<i>Veillonella dispar</i> (39778)	50	BPID00351A
H10	Pan Bacteria 1					BPCL00360A
H11	Pan Bacteria 3					BPCL00362A
H12	PPC					BPCL00365A

No Template Control (NTC)>35

Microbial DNA Positive Control<34

Note: On Stratagene instruments, Ct of the positive control template >34

Ordering Information

Product	Contents	Cat. no.
Microbial DNA qPCR Array	Array plate, master mix, and microbial DNA-free water for detection of microbial species or genes	330261
Related Products		
Supplemental Microbial qPCR Mastermix ROX™	2 tubes of 1.35 ml each	330530
Supplemental Microbial qPCR Mastermix Fluor	2 tubes of 1.35 ml each	330540
Microbial DNA-Free Water	12 tubes of 1.35 ml each	338132

Microbial DNA qPCR Arrays are intended for molecular biology use only. These products are not intended for the diagnosis, prevention, or treatment of a disease..

Visit www.qiagen.com today to view the full array list!

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