Microbial DNA qPCR Array

Water Analysis

Cat. no. 330261 BAID-1405ZRA

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

The Water Analysis Microbial DNA qPCR Array is a research tool used to screen for fecal-derived bacteria found in water samples. This array provides microbiology researchers with a convenient way to quickly detect the presence of microorganisms in environmental water samples due to fecal contamination. The array contains assays for 45 bacterial species including Actinomyces spp., Arcobacter spp., Bacteroides spp., Bifidobacterium spp., Campylobacter spp., Clostridium spp., Desulfovibrio spp., Enterococcus spp., Mycobacterium spp., Ruminococcus spp., Streptococcus spp., Vibrio spp., and Yersinia spp. Assays to detect enterohaemorrhagic Escherichia coli (EHEC) target the virulence factor genes; eae, stx2A, and stxA genes are included. The bacterial species assays target the 16S rRNA gene, and use PCR amplification primers and hydrolysis-probe detection, which increases the specificity of each assay. Each Water Analysis Microbial DNA qPCR Array plate can analyze up to two samples simultaneously. Pan-bacteria assays that detect a broad range of bacterial species are included to serve as positive controls for bacterial DNA, and the Positive PCR Control assay is included to test for the presence of PCR inhibitors and the efficiency of the polymerase chain reaction. The arrays also include the appropriate Microbial qPCR Mastermix and Microbial DNA-Free Water. Identification of which microorganisms are present in a sample is accomplished using data analysis software with imported CT values generated by the PCR instrument software. The simplicity of the product format and operating procedure allow routine and reliable screening of microorganisms from environmental water samples in any research laboratory with access to a real-time PCR instrument.

Sample & Assay Technologies

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	Actinomyces gerencseriae	52769			50	BPID00009A
A02	Actinomyces israelii	1659			20	BPID00011A
A03	Aeromonas enteropelogenes(29489), Aeromonas punctata(648), Aeromonas media(651) Aeromonas hydrophila	644		Shewanella benthica(43661)	100	BPID00022A
A04	Akkermansia muciniphila	239935			100	BPID00026A
A05	Arcobacter butzleri	28197			20	BPID00035A
A06	Arcobacter skirrowii	28200			30	BPID00036A
A07	Bacteroides thetaiotaomicron	818		Bacteroides acidifaciens(85831), Bacteroides finegoldii(338188), Bacteroides fragilis(817), Bacteroides ovatus(28116), Bacteroides salyersiae(291644)	40	BPID00060A
A08	Bacteroides vulgatus	821		Bacteroides coprocola(310298)	50	BPID00062A
A09	Bifidobacterium adolescentis	1680			50	BPID00063A
A10	Bifidobacterium dentium	1689			40	BPID00066A
A11	Bifidobacterium longum	216816			20	BPID00067A
A12	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
B01	Campylobacter upsaliensis	28080			50	BPID00091A
B02	Catellicoccus marimammalium	300419			20	BPID00102A
B03	Citrobacter freundii	546		Dickeya dadantii(204038), Klebsiella oxytoca(571), Serratia marcescens(615)	100	BPID00108A
B04	Clostridium difficile	1496			30	BPID00110A
B05	Clostridium perfringens	1502			100	BPID00112A
B06	Clostridium septicum	1504			40	BPID00113A
B07	Desulfovibrio desulfuricans	876			300	BPID00127A
B08	Desulfovibrio vulgaris	881			40	BPID00129A
B09	Enterococcus gallinarum(1353) Enterococcus casseliflavus	1353			20	BPID00141A
B10	Enterococcus faecalis	1351			30	BPID00142A
B11	Enterococcus faecium	1352		Enterococcus avium(33945), Enterococcus durans(53345), Enterococcus hirae(1354)	40	BPID00143A
B12	eae		intimin adherence protein	Escherichia coli	30	BPVF00472A
C01	stx2A		shiga-like toxin II A subunit encoded by bacteriophage BP-933W	Escherichia coli	20	BPVF00473A
C02	stxA		Shiga toxin subunit A; RNA-N-glycosidase; catalyticsubunit	Escherichia coli, Shigella dysenteriae	20	BPVF00506A
C03	Helicobacter pylori	210		Helicobacter suis(104628)	50	BPID00176A
C04	Lactobacillus gasseri	1596			50	BPID00189A
C05	Legionella pneumophila	446			100	BPID00201A
C06	Listeria monocytogenes	1639		Listeria welshimeri(1643)	200	BPID00208A
				Escherichia albertii(208962),		

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C07	Morganella morganii	582		Providencia alcalifaciens(126385)	100	BPID00224A
C08	Mycobacterium avium	1764			40	BPID00226A
C09	Mycobacterium intracellulare	1767		Mycobacterium avium(1764)	100	BPID00228A
C10	Ruminococcus bromii	40518			30	BPID00298A
C11	Ruminococcus obeum	40520			30	BPID00300A
C12	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
D01	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
D02	Staphylococcus aureus	1280		Staphylococcus epidermidis(1282)	100	BPID00314A
D03	Streptococcus agalactiae	1311			30	BPID00320A
D04	Streptococcus suis	1307			20	BPID00336A
D05	Vibrio cholerae	666			30	BPID00353A
D06	Vibrio parahaemolyticus	670		Vibrio harveyi(669),Vibrio orientalis(28175),Vibrio shilonii(62153)	40	BPID00354A
D07	Vibrio vulnificus	672			40	BPID00355A
D08	Yersinia enterocolitica	630			100	BPID00357A
D09	Yersinia pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
D10	Pan Bacteria 1					BPCL00360A
D11	Pan Bacteria 3					BPCL00362A
D12	PPC					BPCL00365A
E01	Actinomyces gerencseriae	52769			50	BPID00009A
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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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