

Microbial DNA qPCR Array

Biodefense

Cat. no. 330261 BAID-1201ZRA

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

The Biodefense Microbial DNA qPCR Array is a research tool used to screen for bacterial pathogens that can be used as bioterrorism weapons. This array provides microbiology researchers with a convenient way to quickly detect the presence of bioterrorism-associated bacterial pathogens, and can be used for routine monitoring of potential contamination in air, water, and food sources. The array contains assays for 9 bacterial species including *Bacillus anthracis*, *Brucella* spp., *Campylobacter jejuni*, enterohaemorrhagic *Escherichia coli* (EHEC), *Francisella tularensis*, *Salmonella enterica*, *Shigella dysenteriae*, *Vibrio cholera*, and *Yersinia pestis*. Assays were designed to detect bacterial 16S rRNA gene sequences and use PCR amplification primers and hydrolysis-probe detection, which increases the specificity of each assay. Each Biodefense Microbial DNA qPCR Array plate can analyze up to eight 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 bioterrorism-related microorganisms 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	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
A02	wbkA		mannosyltransferase	Brucella abortus, Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
A03	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
A04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
A05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
A06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
A07	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
A08	Vibrio cholerae	666			30	BPID00353A
A09	Yersinia pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
A10	Pan Bacteria 1					BPCL00360A
A11	Pan Bacteria 3					BPCL00362A
A12	PPC					BPCL00365A
B01	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
B02	wbkA		mannosyltransferase	Brucella abortus, Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
B03	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
B04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
B05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
B06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
B07	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
B08	Vibrio cholerae	666			30	BPID00353A
B09	Yersinia pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
B10	Pan Bacteria 1					BPCL00360A
B11	Pan Bacteria 3					BPCL00362A
B12	PPC					BPCL00365A
C01	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
C02	wbkA		mannosyltransferase	Brucella abortus, Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
	Campylobacter coli(195),Campylobacter					

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 #
C03	subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
C04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
C05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
C06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
C07	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
C08	Vibrio cholerae	666			30	BPID00353A
C09	Yersinia pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
C10	Pan Bacteria 1					BPCL00360A
C11	Pan Bacteria 3					BPCL00362A
C12	PPC					BPCL00365A
D01	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
D02	wbkA		mannosyltransferase	Brucella abortus, Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
D03	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
D04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
D05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
D06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
D07	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
D08	Vibrio cholerae	666			30	BPID00353A
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	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
E02	wbkA		mannosyltransferase	Brucella abortus, Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
E03	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
E04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
E05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
E06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
E07	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A

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 #
E08	Vibrio cholerae	666			30	BPID00353A
E09	Yersinia pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
E10	Pan Bacteria 1					BPCL00360A
E11	Pan Bacteria 3					BPCL00362A
E12	PPC					BPCL00365A
F01	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
F02	wbkA		mannosyltransferase	Brucella abortus, Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
F03	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
F04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
F05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
F06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
F07	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
F08	Vibrio cholerae	666			30	BPID00353A
F09	Yersinia pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
F10	Pan Bacteria 1					BPCL00360A
F11	Pan Bacteria 3					BPCL00362A
F12	PPC					BPCL00365A
G01	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
G02	wbkA		mannosyltransferase	Brucella abortus, Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
G03	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
G04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
G05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
G06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
G07	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
G08	Vibrio cholerae	666			30	BPID00353A
G09	Yersinia pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
G10	Pan Bacteria 1					BPCL00360A
G11	Pan Bacteria 3					BPCL00362A
G12	PPC					BPCL00365A
H01	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
				Brucella abortus, Brucella ovis, Brucella melitensis,		

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 #
H02	wbkA		mannosyltransferase	Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	40	BPVF00456A
H03	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
H04	stxB		Shiga toxin subunit B; receptor binding subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00507A
H05	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
H06	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
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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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