

Microbial DNA qPCR Array

Food Testing: Dairy

Cat. no. 330261 BAID-1402ZRA

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

The Dairy Food Testing Microbial DNA qPCR Array is a research tool used to screen for pathogenic bacteria in dairy food testing studies. This array provides microbiology researchers with a convenient way to quickly detect the presence of pathogenic bacteria found in dairy samples, allowing monitoring of the frequency of bacterial contamination in these samples. The array contains assays to screen for the presence of 18 bacterial species, as well as assays that target 3 different genes for enterohaemorrhagic *Escherichia coli* (EHEC). Species-targeting assays were designed to detect bacterial 16S rRNA gene sequences, and all assays use PCR amplification primers and hydrolysis-probe detection, which increases the specificity of each assay. Each Dairy Food Testing Microbial DNA qPCR Array plate can analyze up to 4 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 or the efficiency of the polymerase chain reaction. The arrays also include the appropriate Microbial qPCR Mastermix and Microbial DNA-Free Water. Identification of which bacterial pathogens 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 bacterial pathogens from dairy 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 cereus	1396		Bacillus cytotoxicus(580165), Bacillus weihenstephanensis(86662)	40	BPID00043A
A02	Bacillus sonorensis(119858) Bacillus licheniformis	1402			30	BPID00044A
A03	wzt		O-antigen export system ATP-binding protein	Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	30	BPVF00457A
A04	Campylobacter fetus	196			20	BPID00085A
A05	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
A06	Klebsiella oxytoca(571) Enterobacter cloacae	550		Citrobacter farmeri(67824), Enterobacter hormaechei(158836), Klebsiella granulomatis(39824), Klebsiella varicola(244366), Enterobacter aerogenes(548), Klebsiella pneumoniae(573), Serratia marcescens(615)	100	BPID00139A
A07	Enterococcus gallinarum(1353) Enterococcus casseliflavus	1353			20	BPID00141A
A08	Enterococcus faecalis	1351			30	BPID00142A
A09	Enterococcus faecium	1352		Enterococcus avium(33945), Enterococcus durans(53345), Enterococcus hirae(1354)	40	BPID00143A
A10	Enterococcus italicus	246144			30	BPID00144A
A11	Escherichia fergusonii(564),Shigella boydii(621),Shigella sonnei(624),Shigella dysenteriae(622), Shigella flexneri(623) Escherichia coli	623		Escherichia albertii(208962), Enterobacter aerogenes(548), Enterobacter cloacae(550), Serratia marcescens(615)	30	BPID00146A
A12	eae		intimin adherence protein	Escherichia coli	30	BPVF00472A
B01	stx2A		shiga-like toxin II A subunit encoded by bacteriophage BP-933W	Escherichia coli	20	BPVF00473A
B02	stxA		Shiga toxin subunit A; RNA-N-glycosidase; catalytic subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00506A
B03	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
B04	Listeria monocytogenes	1639		Listeria welshimeri(1643)	200	BPID00208A
B05	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
B06	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
B07	Staphylococcus aureus	1280		Staphylococcus epidermidis(1282)	100	BPID00314A
B08	Yersinia enterocolitica	630			100	BPID00357A
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)	1396		Bacillus cytotoxicus(580165), Bacillus	40	BPID00043A

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 #
	Bacillus cereus			weihenstephanensis(86662)		
C02	Bacillus sonorensis(119858) Bacillus licheniformis	1402			30	BPID00044A
C03	wzt		O-antigen export system ATP-binding protein	Brucella ovis, Brucella melitensis, Brucella suis, Brucella canis, Brucella pinnipedialis, Brucella microti	30	BPVF00457A
C04	Campylobacter fetus	196			20	BPID00085A
C05	Campylobacter coli(195),Campylobacter subantarcticus(497724), Campylobacter lari(201) Campylobacter jejuni	197			400	BPID00087A
C06	Klebsiella oxytoca(571) Enterobacter cloacae	550		Citrobacter farmeri(67824), Enterobacter hormaechei(158836), Klebsiella granulomatis(39824), Klebsiella variicola(244366), Enterobacter aerogenes(548), Klebsiella pneumoniae(573), Serratia marcescens(615)	100	BPID00139A
C07	Enterococcus gallinarum(1353) Enterococcus casseliflavus	1353			20	BPID00141A
C08	Enterococcus faecalis	1351			30	BPID00142A
C09	Enterococcus faecium	1352		Enterococcus avium(33945), Enterococcus durans(53345), Enterococcus hirae(1354)	40	BPID00143A
C10	Enterococcus italicus	246144			30	BPID00144A
C11	Escherichia fergusonii(564),Shigella boydii(621),Shigella sonnei(624),Shigella dysenteriae(622), Shigella flexneri(623) Escherichia coli	623		Escherichia albertii(208962), Enterobacter aerogenes(548), Enterobacter cloacae(550), Serratia marcescens(615)	30	BPID00146A
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D01	stx2A		shiga-like toxin II A subunit encoded by bacteriophage BP-933W	Escherichia coli	20	BPVF00473A
D02	stxA		Shiga toxin subunit A; RNA-N-glycosidase; catalytic subunit	Escherichia coli, Shigella dysenteriae	20	BPVF00506A
D03	Francisella novicida(264) Francisella tularensis	263			40	BPID00157A
D04	Listeria monocytogenes	1639		Listeria welshimeri(1643)	200	BPID00208A
D05	Salmonella enterica	28901		Citrobacter amalonaticus(35703)	100	BPID00302A
D06	Shigella dysenteriae	622		Salmonella bongori(54736)	100	BPID00307A
D07	Staphylococcus aureus	1280		Staphylococcus epidermidis(1282)	100	BPID00314A
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	Bacillus anthracis(1392) Bacillus cereus	1396		Bacillus cytotoxicus(580165), Bacillus weihenstephanensis(86662)	40	BPID00043A
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E06	Klebsiella oxytoca(571) Enterobacter cloacae	550		Citrobacter farmeri(67824), Enterobacter hormaechei(158836), Klebsiella granulomatis(39824), Klebsiella variicola(244366), Enterobacter aerogenes(548), Klebsiella pneumoniae(573), Serratia marcescens(615)	100	BPID00139A
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G01	Bacillus anthracis(1392) Bacillus cereus	1396		Bacillus cytotoxicus(580165), Bacillus weihenstephanensis(86662)	40	BPID00043A
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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..

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