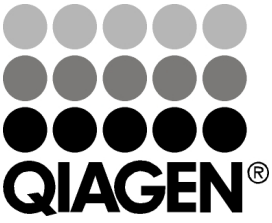
Microbial DNA qPCR Array

Sepsis

Cat. no. 330261 BAID-1903ZRA

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

The Sepsis Microbial DNA qPCR Array is a research tool used to screen for pathogenic bacteria and fungi associated with bloodstream infections. Sepsis results from the body's severe response to microorganisms present in the bloodstream and other body sites. This array provides microbiology researchers with a convenient way to quickly detect the presence of pathogenic microorganisms from sepsis-associated samples such as blood, blood culture, or isolated bacterial colonies, and can be used to monitor the frequency of sepsis-related microbial infections in epidemiology research studies. The array contains assays for 89 gram-positive and gram-negative bacterial pathogens as well as fungal pathogenic species from the Aspergillus and Candida genera. The array also contains assays for methicillin-resistant Staphylococcus aureus. Assays were designed to detect bacterial 16S rRNA gene and fungal ribosomal rRNA gene sequences. For detection of methicillin-resistant Staphylococcus aureus, assays were designed to detect the antibiotic resistance gene, mecA, and the virulence factor genes, lukF and spa. These assays use PCR amplification primers and hydrolysis-probe detection, which increases their specificity. 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 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 microbial 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 microbial pathogens from 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	Achromobacter xylosoxidans	85698			100	BPID00002A
A02	Acinetobacter baumannii	470			100	BPID00004A
A03	Acinetobacter rhizosphaerae(243922) Acinetobacter calcoaceticus	471			50	BPID00005A
A04	Aerococcus viridans	1377			20	BPID00021A
A05	Aeromonas enteropelogenes(29489), Aeromonas punctata(648), Aeromonas media(651) Aeromonas hydrophila	644		Shewanella benthica(43661)	100	BPID00022A
A06	Aeromonas veronii(654) Aeromonas sobria	646			40	BPID00023A
A07	Alcaligenes faecalis	511			30	BPID00027A
A08	Aspergillus flavus	5059			50	BPID00037A
A09	Aspergillus fumigatus	746128			20	BPID00038A
A10	Bacillus anthracis	1392		Bacillus weihenstephanensis(86662), Bacillus cereus(1396)	40	BPID00042A
A11	Bacillus anthracis(1392) Bacillus cereus	1396		Bacillus cytotoxicus(580165), Bacillus weihenstephanensis(86662)	40	BPID00043A
A12	Bacillus sonorensis(119858) Bacillus licheniformis	1402			30	BPID00044A
B01	Bacteroides fragilis	817			20	BPID00051A
B02	Bifidobacterium longum	216816			20	BPID00067A
B03	Brevibacterium casei	33889			40	BPID00074A
B04	Brevundimonas diminuta	293			200	BPID00075A
B05	Brevundimonas vesicularis	41276		Brevundimonas diminuta(293)	20	BPID00076A
B06	Burkholderia vietnamiensis(60552), Burkholderia pyrrocinia(60550), Burkholderia cenocepacia(95486) Burkholderia cepacia	292		Burkholderia gladioli(28095)	100	BPID00077A
B07	Burkholderia pseudomallei(28450) Burkholderia mallei	13373			20	BPID00079A
B08	Butyrivibrio fibrisolvens	831			30	BPID00082A
B09	Candida albicans	5476			20	BPID00092A
B10	Candida glabrata	5478			20	BPID00093A
B11	Candida krusei	4909			50	BPID00094A
B12	Candida parapsilosis	5480			50	BPID00095A
C01	Candida tropicalis	5482			20	BPID00096A
C02	Citrobacter freundii	546		Dickeya dadantii(204038), Klebsiella oxytoca(571), Serratia marcescens(615)	100	BPID00108A
C03	Clostridium perfringens	1502			100	BPID00112A
C04	Clostridium sordellii	1505			20	BPID00114A
C05	Corynebacterium diphtheriae	1717		Corynebacterium simulans(146827)	30	BPID00122A
C06	Desulfovibrio desulfuricans	876			300	BPID00127A
C07	Klebsiella oxytoca(571) Enterobacter cloacae	550		Citrobacter farmeri(67824), Enterobacter hormaechei(158836), Klebsiella granulomatis(39824), Klebsiella variicola(244366), Enterobacter aerogenes(548),	100	BPID00139A

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				Klebsiella pneumoniae(573), Serratia marcescens(615)		
C08	Enterococcus faecalis	1351			30	BPID00142A
C09	Enterococcus faecium	1352		Enterococcus avium(33945), Enterococcus durans(53345), Enterococcus hirae(1354)	40	BPID00143A
C10	Erysipelothrix rhusiopathiae	1648			20	BPID00145A
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
C12	Exiguobacterium aurantiacum	33987			20	BPID00153A
D01	Fusobacterium mortiferum	850			100	BPID00158A
D02	Fusobacterium necrophorum	859			100	BPID00159A
D03	Fusobacterium nucleatum	851			30	BPID00160A
D04	Fusobacterium varium	856			40	BPID00162A
D05	Geobacillus stearothermophilus	1422			300	BPID00167A
D06	Haemophilus influenzae	727		Haemophilus haemolyticus(726)	20	BPID00171A
D07	Hafnia alvei	569		Pectobacterium atrosepticum(29471), Pectobacterium wasabiae(55208),Serratia proteamaculans(28151)	20	BPID00173A
D08	Helicobacter pylori	210		Helicobacter suis(104628)	50	BPID00176A
D09	Kocuria kristinae	37923			20	BPID00182A
D10	Leifsonia aquatica	144185			40	BPID00202A
D11	Methylobacterium fujisawaense	107400			20	BPID00213A
D12	Methylobacterium zatmanii	29429			40	BPID00215A
E01	Micrococcus luteus	1270			50	BPID00217A
E02	Morganella morganii	582		Escherichia albertii(208962), Providencia alcalifaciens(126385)	100	BPID00224A
E03	Neisseria meningitidis	487		Neisseria cinerea(483), Neisseria gonorrhoeae(485)	300	BPID00241A
E04	Nocardia farcinica	37329			20	BPID00247A
E05	Ochrobactrum tritici(94626) Ochrobactrum anthropi	529			100	BPID00250A
E06	Paenibacillus larvae	1464			20	BPID00252A
E07	Paenibacillus macerans	44252			50	BPID00253A
E08	Paenibacillus thiaminolyticus	49283		Paenibacillus popilliae(78057)	20	BPID00254A
E09	Pantoea ananatis(553) Pantoea agglomerans	549		Erwinia tasmaniensis(338565), Kluyvera ascorbata(51288), Sodalis glossinidius(63612)	30	BPID00255A
E10	Pediococcus acidilactici	1254			40	BPID00262A
E11	Pediococcus pentosaceus	1255		Pediococcus acidilactici(1254)	20	BPID00263A
E12	Plesiomonas shigelloides	703			30	BPID00267A
F01	Prevotella bivia	28125			20	BPID00272A
F02	Prevotella intermedia	28131			30	BPID00277A
F03	Prevotella melaninogenica	28132			20	BPID00279A
F04	Propionibacterium acnes	1747			20	BPID00285A
	Proteus vulgaris(585)			Candidatus		

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F05	Proteus mirabilis	584		hamiltonella(568987)	200	BPID00287A
F06	Pseudomonas aeruginosa	287			30	BPID00288A
F07	Ewingella americana(41202) Rahnella aquatilis	34038			20	BPID00293A
F08	Ralstonia pickettii	329			20	BPID00294A
F09	Staphylococcus epidermidis	1282		Staphylococcus aureus(1280), Staphylococcus haemolyticus(1283), Staphylococcus pettenkoferi(170573)	100	BPID00316A
F10	Staphylococcus arlettae(29378) Staphylococcus saprophyticus	29385			100	BPID00317A
F11	Xanthomonas retroflexus(305959), Pseudomonas geniculata(86188) Stenotrophomonas maltophilia	40324			30	BPID00318A
F12	Streptococcus agalactiae	1311			30	BPID00320A
G01	Streptococcus anginosus	1328			30	BPID00321A
G02	Streptococcus mitis	28037		Streptococcus infantis(68892), Streptococcus oralis(1303), Streptococcus pneumoniae(1313), Streptococcus porcinus(1340), Streptococcus pseudopneumoniae(257758)	100	BPID00327A
G03	Streptococcus mutans	1309			400	BPID00328A
G04	Streptococcus pneumoniae(1313), Streptococcus infantis(68892) Streptococcus oralis	1303		Streptococcus equi(1336), Streptococcus pseudopneumoniae(257758), Streptococcus mitis(28037)	40	BPID00329A
G05	Streptococcus pneumoniae	1313		Streptococcus infantis(68892), Streptococcus oralis(1303), Streptococcus pseudopneumoniae(257758), Streptococcus mitis(28037)	20	BPID00331A
G06	Streptococcus pyogenes	1314			50	BPID00332A
G07	Streptococcus thermophilus(1308) Streptococcus salivarius	1304			100	BPID00333A
G08	Streptococcus sanguinis	1305		Streptococcus pseudopneumoniae(257758)	50	BPID00334A
G09	Streptomyces bikiniensis	1896			50	BPID00337A
G10	Streptomyces mediolani(68237), Streptomyces microflavus(1919), Streptomyces anulatus(1892), Streptomyces parvus(66428), Streptomyces finlayi(67296) Streptomyces griseus	1911			40	BPID00338A
G11	Vibrio cholerae	666			30	BPID00353A
G12	Vibrio parahaemolyticus	670		Vibrio harveyi(669),Vibrio orientalis(28175),Vibrio shilonii(62153)	40	BPID00354A
H01	Vibrio vulnificus	672			40	BPID00355A
H02	Weissella confusa	1583			30	BPID00356A
H03	Yersinia enterocolitica	630			100	BPID00357A
	Yersinia					

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H04	pseudotuberculosis(633) Yersinia pestis	633		Yersinia rohdei(29485)	100	BPID00358A
H05	Staphylococcus aureus	1280		Staphylococcus epidermidis(1282)	100	BPID00314A
H06	mecA		Beta-lactam resistance		40	BPAR00374A
H07	lukF		Panton-Valentine leukocidin chain F precursor	Staphylococcus aureus	20	BPVF00517A
H08	spa		Immunoglobulin G binding protein A precursor	Staphylococcus aureus	200	BPVF00518A
H09	Pan Aspergillus/Candida	5052				BPCL00359A
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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