

Microbial DNA qPCR Arrays

For application-specific microbial identification and profiling by real-time PCR

Microbial DNA qPCR Arrays are panels of assays for identifying and profiling related microbial species, virulence factor genes or antibiotic resistance genes. Use one of our targeted panels or design your own from a collection of 500+ laboratory-verified assays.

Microbial DNA qPCR Arrays provide:

- Application-focused microbial targets, yielding relevant results
- Guaranteed detection and quantitation using lab-verified assays
- Reliable results driven by integrated control assays
- Complimentary data analysis tools for simplified interpretation

Focused metagenomics with the largest microbial assay pipeline

Determining the functional relevance of specific microbes is emerging as an integral part of research in biomedical, veterinary and food safety research. QIAGEN has developed over 580 qPCR assays for bacteria, virus and protist species, as well as genes for virulence factors and antibiotic resistance. Microbial DNA qPCR Arrays draw upon this extensive pool of assays, assembling panels for specific applications.

Assay design and integrated controls ensure accurate analysis

Each well in a Microbial DNA qPCR Array contains a hydrolysis probe assay that enables detection of a specific microbial gene or species, or indication of a function (virulence or antibiotic resistance) (Figure 1). The assays are designed using a proprietary and experimentally verified algorithm, providing uniform PCR efficiency and amplification conditions. Each undergoes rigorous experimental verification to ensure high sensitivity and specificity. Critical controls on each array guarantee experimental success. Pan-bacterial and pan-fungal DNA assays quantify the microbial DNA in a sample, enabling data normalization, and the positive PCR control prevents false negative results by testing for PCR reaction inhibition.

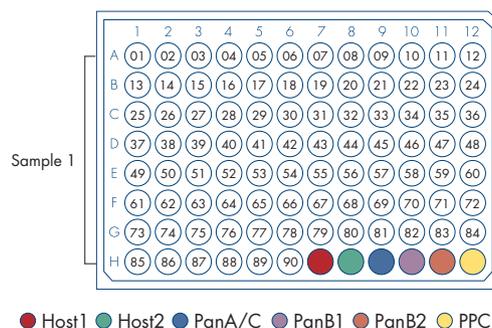


Figure 1. Sample Microbial DNA qPCR Array plate. This array plate format tests one sample with 90 microbial assays. Each well contains one unique test. Also included are controls for host DNA, pan-fungal DNA, pan-bacterial DNA and a positive PCR control.

Table 1. List of Microbial DNA qPCR Arrays with array ID*

Antibiotic Resistance Genes (1901)	Food Testing: Seafood (1102)	Sepsis (1903)
Bacterial Vaginosis (1401)	Food Testing: Vegetable (1103)	Urinary Tract Infections (1205)
Biodefense (1201)	Intestinal Infections (1403)	Vaginal Flora (1902)
Food Testing: Dairy (1402)	Metabolic Disease (1406)	Water Analysis (1505)
Food Testing: Meat (1202)	Oral Disease (1904)	Custom — user-selected assay panels
Food Testing: Poultry (1101)	Respiratory Infections (1404)	

* To view assay lists for each array, visit www.qiagen.com/search/microbial-dna-qpcr-arrays?catno=BAID-XXXXZ#geneglobe, where XXXX equals the array ID (the 4-digit code listed in parentheses after each array).

Application: Profile disease-causing bacteria

The Vaginal Flora Microbial DNA qPCR Array correlated increased amounts of *Gardnerella vaginalis*, with reduced amounts of *Lactobacillus crispatus*. The experimental results suggested that *L. crispatus* may play a protective role in the human vagina (Figure 2).

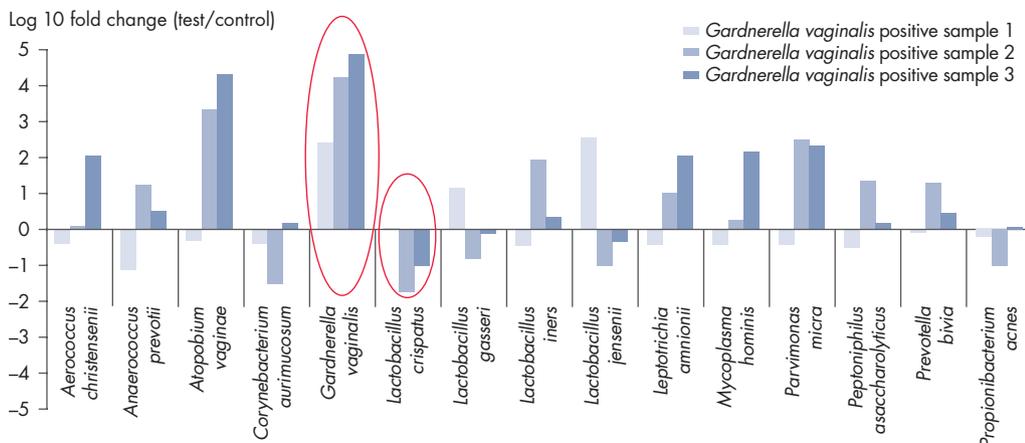


Figure 2. Accurate profiling of pathogenic and commensal microbes in a disease state. Samples testing positive for *Gardnerella vaginalis* using the Vaginal Flora Microbial DNA qPCR Array (BAID-1902Z) were compared to normal samples (n=3). Fold-change in microbial species abundance was calculated by the $\Delta\Delta C_t$ method using human genomic DNA to normalize. As the relative abundance of *Gardnerella vaginalis* increases, the abundance of the commensal species *Lactobacillus crispatus* decreases. Also, an increase in *Gardnerella vaginalis* was associated with an increase in other bacterial vaginosis-associated microbial species.

Ordering Information

Product	Contents	Cat. no.
Microbial DNA qPCR Arrays	Biology-specific panels of assays in 96- or 384-well ready-to-use PCR plates, available in various pack sizes; mastermix included	330261
Custom Microbial DNA qPCR Arrays	User-selected assays dispensed into 96- or 384-well plates, available in various pack sizes; mastermix included	330161
Microbial DNA Positive Control V2	One 50 μ l tube at 10x concentration	338135
Microbial DNA-Free Water	12 tubes of 1.35 ml each	338132

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

Find out more at www.qiagen.com/microbiome!

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