Microbial DNA qPCR Multi-Assay Kit

Bordetella pertussis Pathogenicity

Cat. no. 330043 BBID-1502ZR-3

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

The Bordetella pertussis Pathogenicity Microbial qPCR DNA Multi-Assay Kit is a research tool used for the detection of virulence factors from B. pertussis. This multi-assay kit provides microbiology researchers with a convenient way to quickly detect virulence factor genes from B. pertussis in isolated bacterial colonies, metagenomic samples, or other sample types. Virulence factors facilitate development of disease by allowing an infectious bacterium to establish itself on the host, in part by subverting or eluding host defenses, allowing attachment to the host, production of toxins, etc. The kit contains assays for detecting B. pertussis itself and its virulence factor gene ptxA. The assays use PCR amplification primers and hydrolysis-probe detection, increasing their specificity. The kit also contains Microbial qPCR Mastermix, Microbial DNA-Free Water, Microbial DNA Positive Control, and Positive PCR Control. The Positive PCR Control assay is included to test for the presence of PCR inhibitors or the efficiency of the polymerase chain reaction. Identification of whether pathogenic B. pertussis is 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 pathogenic B. pertussis from samples in any research laboratory with access to a real-time PCR instrument.

For further details, consult the *Microbial DNA qPCR Handbook*.

Microbial DNA qPCR Multi-Assay Kits contents

Number of reactions	**20 (25 µl PCR reactions)**
Microbial DNA qPCR Assay BPID00071A	1 tube (20 µl)
Microbial DNA qPCR Assay BPVF00455A	1 tube (20 µl)
Positive PCR Control (PPC)	1 tube (20 µl)
Microbial DNA Positive Control	1 tube (50 µl)
Microbial DNA-Free Water	1 or 2 tubes (1.35 ml each), depending on number of assays
Microbial qPCR Mastermix	1 or 2 tubes (1.35 ml each), depending on number of assays

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Quality control data

Assay BPID00071A name	**Bordetella spp**
Assay BPID00071A No Template Control CT>35	Pass
Assay BPID00071A DNA Positive Control Template CT<34	Pass
Positive PCR Control CT = 22 ± 2	Pass
Microbial DNA Positive Control, CT<34	Pass
Microbial DNA-Free Water, free of contaminating DNA	Pass

Assay BPVF00455A name	**ptxA**
Assay BPVF00455A No Template Control CT>35	Pass
Assay BPVF00455A DNA Positive Control Template CT<34	Pass
Positive PCR Control CT = 22 ± 2	Pass
Microbial DNA Positive Control, CT<34	Pass
Microbial DNA-Free Water, free of contaminating DNA	Pass

Shipping and storage

Microbial DNA qPCR Multi-Assay Kits are shipped on blue ice packs. For long-term storage, keep Microbial DNA qPCR Multi-Assay Kits at –20°C. 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

Assay #	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 #
1	Bordetella bronchiseptica(518), Bordetella pertussis(520) Bordetella parapertussis	519			30	BPID00071A
2	ptxA		pertussis toxin subunit 1 precursor	Bordetella pertussis	20	BPVF00455A

PCR plate loading sequence

Position	Species/gene	Template
A1	Bordetella parapertussis	NTC
A2	Bordetella parapertussis	Microbial DNA Positive Control
A3	Bordetella parapertussis	Sample 1
A4	ptxA	NTC
A5	ptxA	Microbial DNA Positive Control
A6	ptxA	Sample 1
A7	Bordetella parapertussis	NTC
A8	Bordetella parapertussis	Microbial DNA Positive Control
A9	Bordetella parapertussis	Sample 2
A10	ptxA	NTC
A11	ptxA	Microbial DNA Positive Control
A12	ptxA	Sample 2
B1	Bordetella parapertussis	NTC
B2	Bordetella parapertussis	Microbial DNA Positive Control
B3	Bordetella parapertussis	Sample 3
B4	ptxA	NTC
B5	ptxA	Microbial DNA Positive Control
B6	ptxA	Sample 3
B7	Bordetella parapertussis	NTC
B8	Bordetella parapertussis	Microbial DNA Positive Control
B9	Bordetella parapertussis	Sample 4
B10	ptxA	NTC
B11	ptxA	Microbial DNA Positive Control
B12	ptxA	Sample 4
C1	Bordetella parapertussis	NTC
C2	Bordetella parapertussis	Microbial DNA Positive Control
C3	Bordetella parapertussis	Sample 5
C4	ptxA	NTC
C5	ptxA	Microbial DNA Positive Control
C6	ptxA	Sample 5
C7	Bordetella parapertussis	NTC
C8	Bordetella parapertussis	Microbial DNA Positive Control
C9	Bordetella parapertussis	Sample 6
C10	ptxA	NTC
C11	ptxA	Microbial DNA Positive Control
C12	ptxA	Sample 6
D1	Bordetella parapertussis	NTC
D2	Bordetella parapertussis	Microbial DNA Positive Control
D3	Bordetella parapertussis	Sample 7
D4	ptxA	NTC
D5	ptxA	Microbial DNA Positive Control
D6	ptxA	Sample 7
D7	Bordetella parapertussis	NTC
D8	Bordetella parapertussis	Microbial DNA Positive Control
D9	Bordetella parapertussis	Sample 8
D10	ptxA	NTC
D11	ptxA	Microbial DNA Positive Control
D12	ptxA	Sample 8
E1	Bordetella parapertussis	NTC
E2	Bordetella parapertussis	Microbial DNA Positive Control
E3	Bordetella parapertussis	Sample 9
E4	ptxA	NTC
E5	ptxA	Microbial DNA Positive Control
E6	ptxA	Sample 9

Position	Species/gene	Template
E7	Bordetella parapertussis	NTC
E8	Bordetella parapertussis	Microbial DNA Positive Control
E9	Bordetella parapertussis	Sample 10
E10	ptxA	NTC
E11	ptxA	Microbial DNA Positive Control
E12	ptxA	Sample 10
F1	Bordetella parapertussis	NTC
F2	Bordetella parapertussis	Microbial DNA Positive Control
F3	Bordetella parapertussis	Sample 11
F4	ptxA	NTC
F5	ptxA	Microbial DNA Positive Control
F6	ptxA	Sample 11
F7	Bordetella parapertussis	NTC
F8	Bordetella parapertussis	Microbial DNA Positive Control
F9	Bordetella parapertussis	Sample 12
F10	ptxA	NTC
F11	ptxA	Microbial DNA Positive Control
F12	ptxA	Sample 12
G1	Empty	Empty
G2	Empty	Empty
G3	Empty	Empty
G4	Empty	Empty
G5	Empty	Empty
G6	Empty	Empty
G7	Empty	Empty
G8	Empty	Empty
G9	Empty	Empty
G10	Empty	Empty
G11	Empty	Empty
G12	Empty	Empty
H1	PPC	Sample1
H2	PPC	Sample2
H3	PPC	Sample3
H4	PPC	Sample4
H5	PPC	Sample5
H6	PPC	Sample6
H7	PPC	Sample7
H8	PPC	Sample8
H9	PPC	Sample9
H10	PPC	Sample10
H11	PPC	Sample11
H12	PPC	Sample12

Ordering Information

Product	Contents	Cat. no.
Microbial DNA qPCR Multi-Assay Kit	One 20 µl tube for each Microbial DNA qPCR Assay, 1 tube Positive PCR Control (20 µl), 1 tube Microbial DNA Positive Control (20 µl), 1 or 2 tubes Microbial DNA-Free Water (1.35 ml each),1 or 2 tubes Microbial qPCR Mastermix (1.35 ml each)	330043

Microbial DNA qPCR Multi-Assay Kits 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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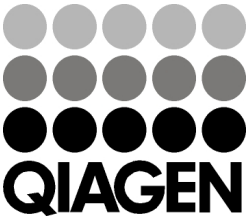

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