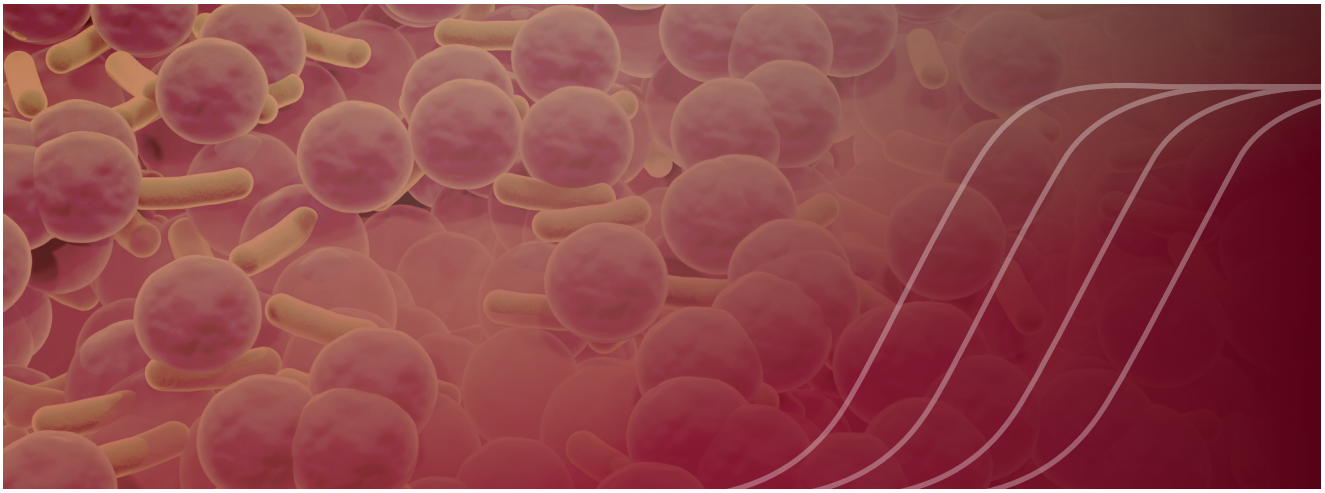
Cica Geneus™ Carbapenemase Genotype Real Time PCR Detection KIT

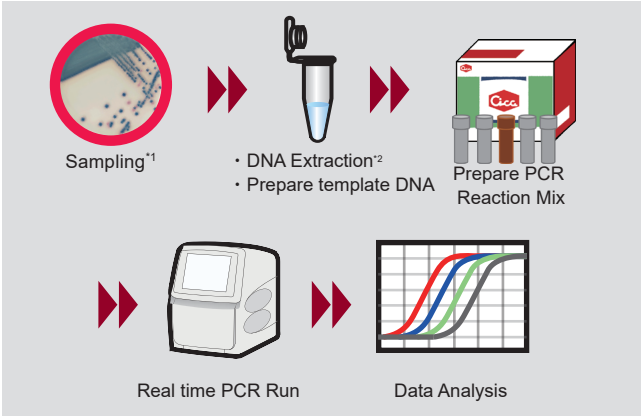


Carbapenems are considered last-resort antibiotics because of their broad-spectrum activity and potent bactericidal effects. The global spread of Carbapenemase-producing Enterobacterales (CPE) has become a major public health concern. Since carbapenemase genes are often located on plasmids, they can spread between bacterial species through horizontal gene transfer. Early detection of CPE and prompt infection control measures are essential to prevent transmission.
This kit contains two 4-plex real-time PCR assay that simultaneously detects six representative Carbapenemase genotypes, and an internal control (IC) to monitor PCR inhibition.

Characteristics

- Simultaneous detection of six representative Carbapenemases genotypes（IMP-(1, 2) group, NDM, KPC, VIM, OXA-48 like, GES(Carbapenemase type)）is possible by 2 kinds of PCR.
- The presence or absence of PCR inhibition can be confirmed by internal control.
- Detection is possible in about 1 hour by real-time PCR.

Work flow



Composition (30 rxns)

Reagent		Volume
A	AptaTaq DNA Master (5×Conc.) *3	240 µL ×1
B	PCR Supplement	360 µL ×1
C	Primer/Probe Mix 1	150 µL ×1
D	Primer/Probe Mix 2	150 µL ×1
E	Positive Control	150 µL ×1

*1 CHROMagar™ mSuperCarba is recommended.
*2 Cica Geneus™ DNA extraction reagent is recommemded.
*3 AptaTaq DNA Master（5×Conc.） is the product of Roche Diagnostics K.K.

Product information

Product name	Packaging size	Stored at	Product No.
Cica Geneus™ Carbapenemase Genotype Real Time PCR Detection KIT	30 rxns	-25～-20 ℃	07515-96

Kanto Chemical

Analyte/Fluorophore

Reaction mixture 1

Analyte	Fluorophore
VIM	FAM
IMP-(1, 2) group	VIC
GES (Carbapenemase type)	ROX (Red610)
Internal Control	Cy5

Reaction mixture 2

Analyte	Fluorophore
KPC	FAM
OXA-48 like	VIC
NDM	ROX (Red610)
Internal Control	Cy5

Real-time PCR instruments compatible with 4 types of fluorescent dyes: FAM, VIC, ROX (Red610), Cy5

Compatibility (Based on internal test)

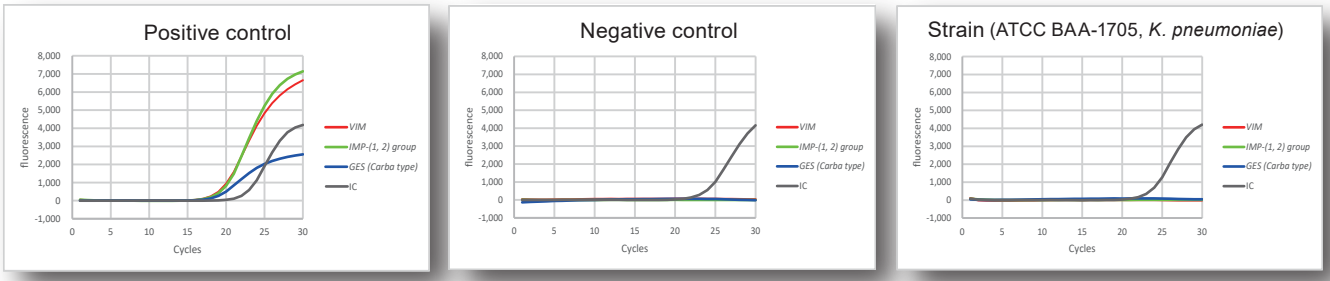
- Thermo Fisher Scientific: QuantStudio5
- Bio-Rad: CFX Opus 96
- Roche Diagnostics: LightCycler® 96
- Roche Diagnostics: cobas® z 480※

※Color compensation (fluorescent dye calibration) is essentia

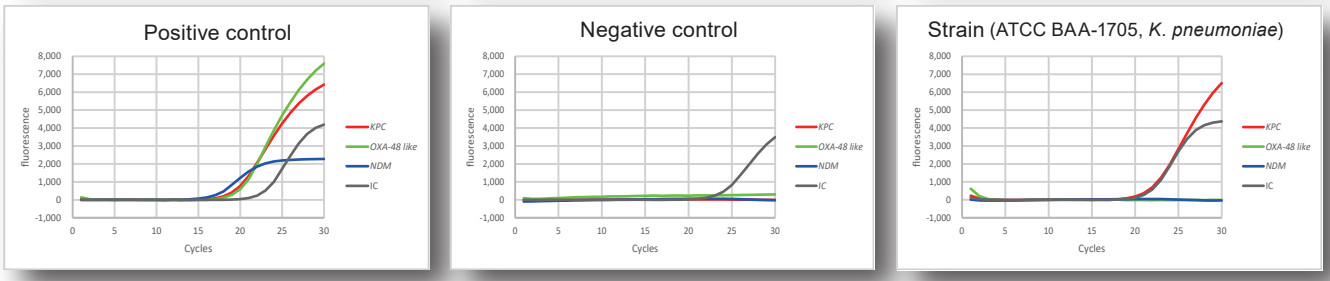
Results

Amplification curve：Positive control (Reagent E) and TE buffer as a negative control and some strain were tested.

Reaction mixture 1



Reaction mixture 2



Equipment : CFX Opus 96

Related Products

Real-time PCR KIT

Product name	Packaging size	Stored at	Product No.
CicaGeneus™ Vancomycin Resistance Gene Real Time PCR Detection KIT Target genes : *femA*, *mecA*, *blaZ*, IC	30 rxns	-25～-20 ℃	07440-96
CicaGeneus™ CDtoxin Gene Real Time PCR Detection KIT Target genes : toxinA, toxinB, binary toxin	30 rxns	-25～-20 ℃	07443-96
CicaGeneus™ MRSA Related Gene Real Time PCR Detection KIT Target genes : *femA*, *mecA*, *blaZ*, IC	30 rxns	-25～-20 ℃	07512-96
CicaGeneus™ ESBL Genotype Real Time PCR Detection KIT Target genes : : (TEM, SHV, CTX-M-1, CTX-M-9, CTX-M-2 or 8 or 25, GES(ESBL)) group, IC	30 rxns	-25～-20 ℃	07498-96

※Fluorophore：FAM, VIC, ROX (Red610), Cy5

DNA Extraction KIT

Product name	Packaging size	Stored at	Product No.
Cica Geneus™ DNA Extraction reagent	120 rxns	2～8 ℃	08178-96

- Please use the products listed in the catalog as reagents (chemicals used for testing or research purpose).
- Product information is subject to change without notice. For the latest information, please have a look at our website "Cica-Web".

【Contact】

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REAGENT DIVISION

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Please scan for more product details!

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