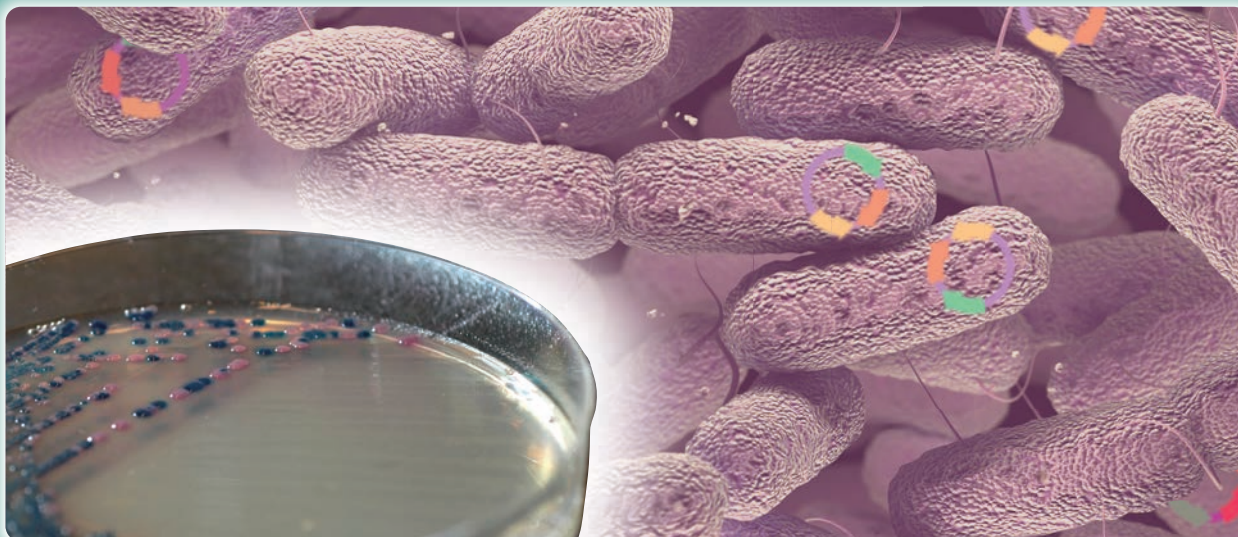


Cica Geneus[®] AmpC Genotype Detection KIT



Kanto Reagents



AmpC producing bacteria, which susceptibility is similar to ESBL-producing bacteria, are resistant bacteria inhibited by boronic acid, cloxacillin, etc. They are concerned about becoming ineffective to antibacterial drugs of cephalosporin and cephamycin type. This kit can detect 6 representative plasmid-mediated AmpC gene family by two kinds of multiplex PCR.

This kit was collaboratively developed by Prof. Dr. Sugai, Assistant Prof. Dr. Kayama and M.M.Sc. Hara at Hiroshima University.

Characteristics

- This kit can detect 6 AmpC gene family (CIT family, FOX family, ACT family, DHA family, ACC family, and MOX family).
- Required time is approximately 3 hours.
- Suitable for use in common thermal cycler.

Composition (30 rxns)

Reagent	Volume
A AptaTaq DNA Master(5×Conc.) ^{*1}	240 μL × 1
B PCR supplement	420 μL × 1
C Primer mix α	120 μL × 1
D Primer mix β	120 μL × 1
E Positive control	100 μL × 1
F Loading buffer(6×Conc., Orange-G)	240 μL × 1

^{*1} AptaTaq DNA Master(5×Conc.) is the product of Roche Diagnostics K.K.

Work Flow

Isolate AmpC producing bacteria^{*2}

DNA Extraction^{*3}

Multiplex PCR

Agarose gel electrophoresis

Detection

^{*2} CHROMagar™ AmpC/ESBL differential discs (74054) is recommended.

^{*3} Cica Geneus[®] DNA extraction reagent is sold separately.

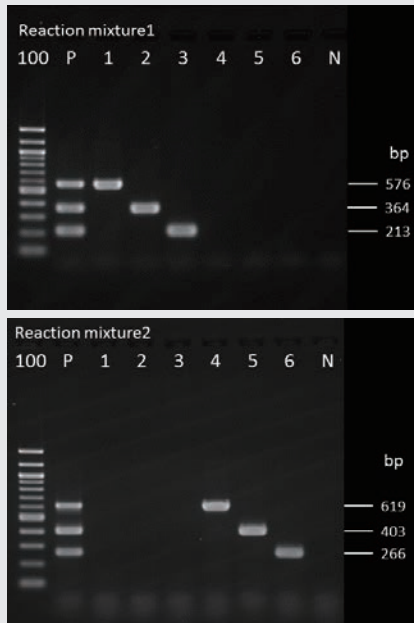


Fig.1 Example of the electrophoretic pattern

100 : 100 bp DNA Ladder, P: Positive control (Reagent E),
 1 : CIT positive bacteria, 2 : FOX positive bacteria,
 3 : ACT positive bacteria, 4 : DHA positive bacteria
 5 : DHA positive bacteria, 6 : MOX artificial gene,
 N : Negative control (TE Buffer)

Table 1 Target genes and its amplicon size

	Target gene	Amplicon size(bp)
Reaction mixture.1	<i>bla</i> _{CIT} family	576
	<i>bla</i> _{FOX} family	364
	<i>bla</i> _{ACT} family	213
Reaction mixture.2	<i>bla</i> _{DHA} family	619
	<i>bla</i> _{ACC} family	403
	<i>bla</i> _{MOX} family	266

- ① Please refer to an attached document.
 - ② From an electrophoretic pattern of two multiplex PCR (Figure. 1), you can estimate AmpC genotype (Table.1) in comparison with the band of the positive control.
- This kit can not identify bacterial species.
 - Even if the AmpC genes are detected by this kit, it may not be resistant to antibiotics because of the gene mutation or expression effects.
 - Some AmpC genes can not be detected by this kit. Also, even if the strain has certain target genotypes, it may not be detectable depending on subtypes.
 - Chromosomal AmpC genes are also detected in bacterial species that carry the certain target family of AmpC genes on their chromosomes.
 - Use TAE buffer for electrophoresis.
 - This kit is for research and experimental use.

Product Information

Product No.	Product Name	Package size	Stored at
08143-96	Cica Geneus [®] AmpC Genotype Detection KIT	30 rxns	-20 °C~-25 °C
08178-96	Cica Geneus [®] DNA Extraction Reagent	120 rxns	2 °C~8 °C

Multiplex PCR kit series

Product No.	Product Name	Package size	Stored at
08180-96	Cica Geneus [®] Staph POT KIT	120 rxns	-20 °C~-25 °C
08180-97		30 rxns	-20 °C~-25 °C
08187-96	Cica Geneus [®] Pseudo POT KIT	50 rxns	-20 °C~-25 °C
08062-96	Cica Geneus [®] Acineto POT KIT	30 rxns	-20 °C~-25 °C
08362-97	Cica Geneus [®] E.coli POT KIT	30 rxns	-20 °C~-25 °C
08112-96	Cica Geneus [®] ESBL Genotype Detection KIT	30 rxns	-20 °C~-25 °C
08158-96	Cica Geneus [®] Carbapenemase Genotype Detection KIT2	30 rxns	-20 °C~-25 °C

Related reagent

Product No.	Product Name	Package size
72141	CHROMagar™ mSuperCARBA (prepared)	10 sheets
46509-79	10XTAE buffer	1 L
14575-43	Ethidium bromide solution	10 mL
01098-23	Agarose KANTO LE	100 g
01016-96	AptaTaq DNA Master(5×Conc.)	500 μL

- This product is developed with Hiroshima University.



Please access [Cica-web](#) to catch the detail of our reagent information !

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