

44022 KPC ChromoSelect Agar Base

KPC *ChromoSelect* Agar Base is recommended for the detection of gram negative bacteria with a reduced susceptibility to a carbapenem agents.

Composition:

Ingredients	Grams/Litre
Peptone special	15.0
Chromogenic mixture	3.0
Agar	15.0
Final pH 7.0 ± 0.2 at 25°C	

Store at 2-8°C and the prepared medium at 2-8°C. Use before expiry date on the label.

Appearance: Faint beige, homogeneous, free flowing powder.
Gelling: Firm
Color and Clarity: Light amber colored, clear to slightly opalescent gel forms in Petri plates.

Directions:

Suspend 16.5 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add rehydrated contents of 1 vial of KPC *ChromoSelect* Selective Supplement (Cat. No. 52099). Mix well and pour into sterile Petri plates.

Principle and Interpretation:

KPC *ChromoSelect* Agar Base is a chromogenic medium designed for the detection and differentiation of KPC producing gram negative bacterial species without selective pre-enrichment. Carbapenems are modern antibiotics and are used to treat life threatening infections that are caused by gram negative, drug resistant pathogens (1). Production of carbapenemase enzyme results in resistance to penicillins, cephalosporins (i.e. cefepime, ceftriaxone), carbapenems (i.e. meropenem, ertapenem) and aztreonam there by making these pathogens multi drug resistant. Most carbapenemase producing bacteria are included in the family *Enterobacteriaceae*, and are thus termed as carbapenem resistant *Enterobacteriaceae* (CRE). Besides the *Enterobacteriaceae* family, rare strains of *Pseudomonas aeruginosa* and *Acinetobacter baumannii* have also be found to produce catrbapenemase (1,2,3). Peptone special provides nitrogenous compounds and other essential growth nutrients. This medium can be made selective by supplementation with antibiotics for detecting microorganisms associated with hospital borne infections. Selective supplements have been added to inhibit the growth of yeast, gram positive organisms and gram negative organisms that do not produce carbapenemase.

This medium is intended to be used as a screening medium. Isolates should be tested further for carbapenem susceptibility following CLSI guidelines. Indole test may be perform for the confirmation of carbapenem resistant *E. coli* because some rare strains of *C. freundii* may produce small pink to magenta coloured colonies similar to *E. coli*. Carbapenem resistant strains of *Klebsiella*, *Enterobacter* and *Serratia* species produce bluish green colonies. *Acinetobacter* and *Salmonella* species produce smooth, colourless colonies. *Pseudomonas* species produce colourless to light yellowish green, translucent colonies with wrinkled edges. Further biochemical tests may be needed for complete identification.



Cultural characteristics with addition of KPC *ChromoSelect* Selective Supplement after 18-24 hours at 35-37°C.

Organisms (ATCC)	Inoculum [CFU]	Growth	Recovery [%]	Colony appearance
<i>Enterococcus faecalis</i> (29212)	$\geq 10^3$	-	0	-
<i>Klebsiella pneumoniae</i> (BAA 1705)	50-100	+++	≥ 50	Bluish green
<i>Klebsiella pneumoniae</i> (13883)	$\geq 10^3$	-	0	-
<i>Candida albicans</i> (60193)	$\geq 10^3$	-	0	-
<i>Staphylococcus aureus</i> (25923)	$\geq 10^3$	-	0	-

References:

1. Pillai D.R. et.al. 2009. *Emerg. Infect. Dis*; Vol. 15, P.827-829
2. Hindiyeth, M., et. al. 2008, *J. Clin. Microbiol.*; Vol. 46, p.2879 -2883
3. Samra, Z., 2008, *J. Clin. Microbiol*; Vol. 146, P.3110-3111.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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