



"Ready & Easy-to-use" kits.  
Lyophilised product



Transport and storage at room temperature.  
Shelf-life: 24 months



Validated according to ISO 13485  
and CE marked

## *P. aeruginosa*, *K. pneumoniae* & *P. mirabilis*

- ▶ ***Pseudomonas*** is a type of bacteria that is found commonly in the environment, like in soil and in water. Of the many different types of *Pseudomonas*, the one that most often causes infections in humans is *Pseudomonas aeruginosa*. *Pseudomonas aeruginosa* is a gram-negative, aerobic, non-spore forming rod that is capable of causing a variety of infections.
- ▶ ***Klebsiella pneumoniae*** belongs to the Enterobacteriaceae family and is described as a gram-negative, encapsulate, and non-motile bacterium. Virulence of the bacterium is provided by a wide array of factors that can lead to infection and antibiotic resistance. The polysaccharide capsule of the organism is the most important virulence factor and allows the bacteria to evade opsonophagocytosis and serum killing by the host organism. A second virulence factor is lipopolysaccharides that coat the outer surface of a gram-negative bacteria. The sensing of lipopolysaccharides releases an inflammatory cascade in the host organism and has been a major culprit of the sequela in sepsis and septic shock. ***Klebsiella pneumoniae* is one of a handful of bacteria that are now experiencing a high rate of antibiotic resistance secondary to alterations in the core genome of the organism.**
- ▶ ***Proteus mirabilis***, part of the Enterobacteriaceae family of bacilli, is a gram-negative, facultative anaerobe with an ability to ferment maltose and inability to ferment lactose. *P. mirabilis* also has swarming motility and the ability to self-elongate and secrete a polysaccharide when in contact with solid surfaces; this allows for attachment and easy motility along surfaces. The flagella of *P. mirabilis* are what allow for its motility; not only does this help support colonization, but it also has been associated with its ability to form biofilms and is suggested to contribute to resistance to host defences and certain antibiotics.
- ▶ **VIASURE *P. aeruginosa*, *K. pneumoniae* & *P. mirabilis* Real Time PCR Detection Kit** is designed for the qualitative detection and differentiation of DNA from *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* and/or *Proteus mirabilis* in blood culture and swab samples, BAS, BAL and sputum specimens by their healthcare professional (HCP). DNA is extracted from clinical samples, amplified using real time PCR and detected using fluorescent reporter dye probes specific for *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* and/or *Proteus mirabilis*.

## *P. aeruginosa*, *K. pneumoniae* & *P. mirabilis*

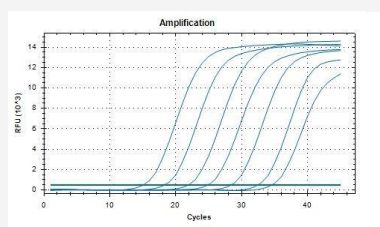
**VIASURE *P. aeruginosa*, *K. pneumoniae* & *P. mirabilis* Real Time PCR Detection Kit** is designed for the qualitative detection and differentiation of DNA from *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* and/or *Proteus mirabilis* in blood culture and swab samples, BAS, BAL and sputum specimens by their healthcare professional (HCP).

**This test is intended to be used as an aid in the diagnosis of *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* and/or *Proteus mirabilis* infection in combination with clinical and epidemiological risk factors.**

DNA is extracted from clinical samples, amplified using real time PCR and detected using fluorescent reporter dye probes specific for *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* and/or *Proteus mirabilis*.

### ► Analytical sensitivity

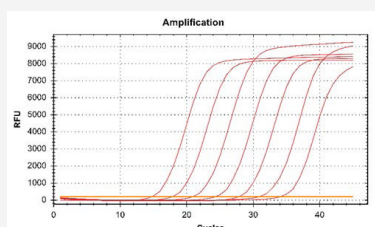
**VIASURE *P. aeruginosa*, *K. pneumoniae* & *P. mirabilis* Real Time PCR Detection Kit** has a detection limit of 5 DNA copies per reaction for *C. trachomatis* and for *N. gonorrhoeae*, with a positive rate of  $\geq 95\%$ , on vaginal swab clinical samples.



**Figure 1.**

Diluciones seriadas de un estándar del gen *oprL* ( $10^7$ - $10^1$  copias/reacción).

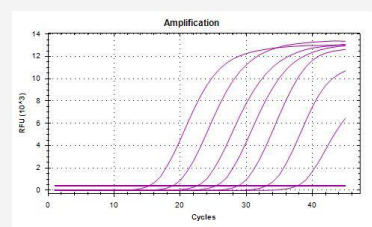
Experimento realizado en el equipo CFX96TM Real-Time PCR Detection System (Bio-Rad) (canal FAM).



**Figure 2.**

Diluciones seriadas de un estándar del gen He-molysin ( $10^7$ - $10^1$  copias/reacción).

Experimento realizado en el equipo CFX96TM Real-Time PCR Detection System (Bio-Rad) (canal ROX).



**Figure 3.**

Diluciones seriadas de un estándar del gen *hns* ( $10^7$ - $10^1$  copias/reacción).

Experimento realizado en el equipo CFX96TM Real-Time PCR Detection System (Bio-Rad) (canal Cy5).

### ► References - VIASURE *P. aeruginosa*, *K. pneumoniae* & *P. mirabilis* Real Time PCR Detection Kit

1 x 8-well strips, low profile ..... VS-PKP101L  
6 x 8-well strips, low profile ..... VS-PKP106L  
12 x 8-well strips, low profile ..... VS-PKP112L  
96-well plate, low profile ..... VS-PKP113L  
4 tubes x 24 reactions ..... VS-PKP196T  
2 x 4-well strips, Rotor-Gene® ..... VS-PKP101

1 x 8-well strips, high profile ..... VS-PKP101H  
6 x 8-well strips, high profile ..... VS-PKP106  
12 x 8-well strips, high profile ..... VS-PKP112H  
96-well plate, high profile ..... VS-PKP113H  
9 x 4-well strips, Rotor-Gene® ..... VS-PKP136  
18 x 4-well strips, Rotor-Gene® ..... VS-PKP172

*For more information and use procedure, read the instructions for use included in this product.*