applied biosystems

Real-time PCR detection of urinary tract microbiota (UTM)

Get fast, accurate results with our easy-to-use solution

Culture-based methods for the detection of UTM pathogens lack sensitivity, are subjective, and can take up to 30 hours from sample to answer. Our new real-time PCR solution for UTM investigations enables rapid detection in just five hours—while enabling increased sensitivity and specificity of detection of urinary tract pathogens, and keeping cost per sample low.

Our new molecular solution is a complete end-to-end workflow for urinary tract pathogen detection—combining the power of Applied Biosystems™ QuantStudio™ 12K Flex Real-Time PCR System with TaqMan® Assays.

Features of this solution include:

- **Rapid detection**—only 5 hours from sample to answer
- **Complete end-to-end solution**—optimized for use on Applied Biosystems™ QuantStudio™ real-time PCR systems with validated sample-to-answer workflow
- **Increased specificity and sensitivity**—over 25% increased accuracy in urinary tract pathogen detection when compared to culture methods
- **Scalable solution with high-throughput option available**—using OpenArray™ nanofluidic technology, capable of processing up to 600 samples per day on a single instrument*
- **Superior service and support**—analytical validation consultation services available to help implement solution with ease

Compared to culture-based methods of detection, our solution not only reduces the time from sample to answer, but verification data also demonstrates a 25% increase in detection accuracy.

Figure 1: QuantStudio 12K Flex Real-Time PCR System.

* Based on three instrument runs in a single 8-hour shift per day in a laboratory. Can increase to 800+ samples per day running workflows immediately after one another across multiple shifts in a day.

See other side for a list of UTM targets and product ordering information.

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Increased productivity, sensitivity, and specificity with real-time PCR technology

Implementing genetic analysis systems and solutions in the laboratory has been directly linked to improved efficiencies, cost savings, and faster time to reportable results[1]. Real-time PCR can detect slow-growing, difficult-to-cultivate microorganisms, making it ideal for when culture methods are inadequate, ambiguous, time consuming, difficult, and costly.

Analytical validation consultation services

To help you implement this workflow into your laboratory with ease, we offer analytical validation consultation services—potentially reducing your overall time to test-launch by 75%.

Organism type	Species	Assay name ID
Bacteria	*Acinetobacter baumannii*	Ba04932084_s1
	Citrobacter freundii	Ba04932088_s1
	Enterobacter aerogenes	Ba04932080_s1
	Enterobacter cloacae	Ba04932087_s1
	Enterococcus faecalis	Ba04932087_s1
	Enterococcus faecium	Ba04932086_s1
	Escherichia coli	Ba04646242_s1
	Klebsiella oxytoca	Ba04932079_s1
	Klebsiella pneumoniae	Ba04932083_s1
	Morganella morganii	Ba04932078_s1
	Proteus mirabilis	Ba04932076_s1
	Proteus vulgaris	Ba04932082_s1
	Providencia stuartii	Ba04932077_s1
	Pseudomonas aeruginosa	Ba04932081_s1
	Staphylococcus saprophyticus	Ba04932085_s1
	Streptococcus agalactiae	Ba04646276_s1
Fungus	*Candida albicans*	Fn04646233_s1
Control	Xeno	Ac00010014_a1

Ordering information

Product	Unit size	Cat. No.
TaqMan OpenArray Real-Time PCR Plate with Inventoried Gene Expression Assays	18(3x) assays x 48 samples	4471124
	56 assays x 48 samples	4471125
	112 assays x 24 samples	4471126

1. Davenport et al, New and developing diagnostic technologies for urinary tract infections, *Nature Reviews Urology* volume 14, pages 296–310 (2017)

Find out more at **thermofisher.com/utm**

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