

A Platform for PCR Based Assays that Use a Pre-amplification Step



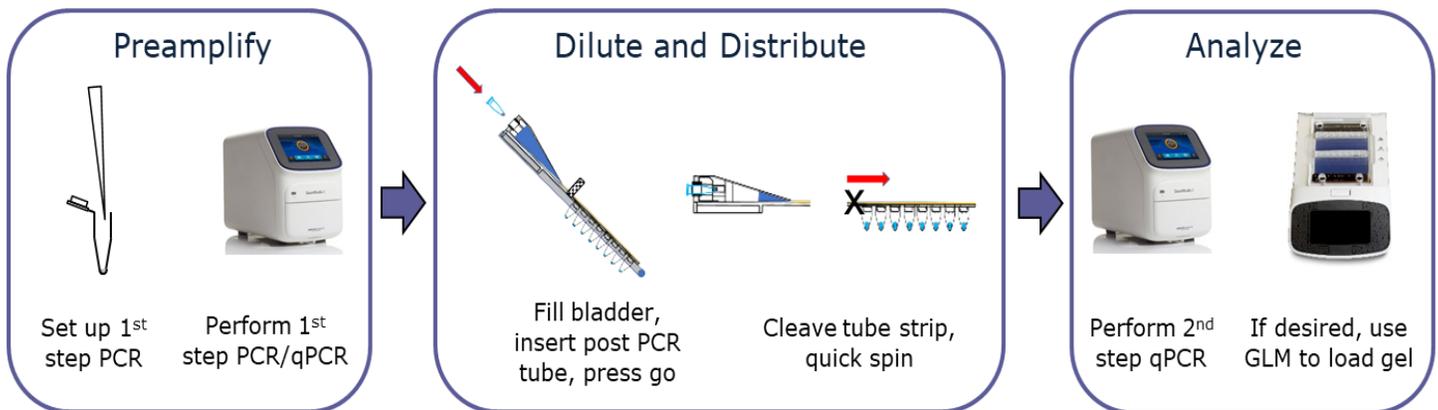
The Alluvia consumable can be used as a vehicle for ready-to-use PCR assays, especially 2-step PCR assays. The system minimizes pipetting steps, provides continuous sample containment, and interfaces with standard instrumentation.

Two-step PCR assays that utilize the Alluvia System (see below):

- **Onco M-Analysis Panel 8**
- **Candida P-Detection Panel 8**

Features and Benefits:

- Utilize 2-step PCR (i.e. pre-amplification, multiplex-nested PCR):
 - Improve sensitivity and specificity,
 - Particularly beneficial for precious, complex, and difficult samples.
- Continuous containment to eliminate PCR product contamination.
- Prepackage PCR biochemistry (lyophilized primers, dNTPs, buffer, enzyme) in a consumable, which remains sealed throughout usage.
- Could be adapted to existing PCR assays.
- Interface with users existing laboratory equipment.
- Easy to use, reduces pipetting and associated errors, attractive form factor.

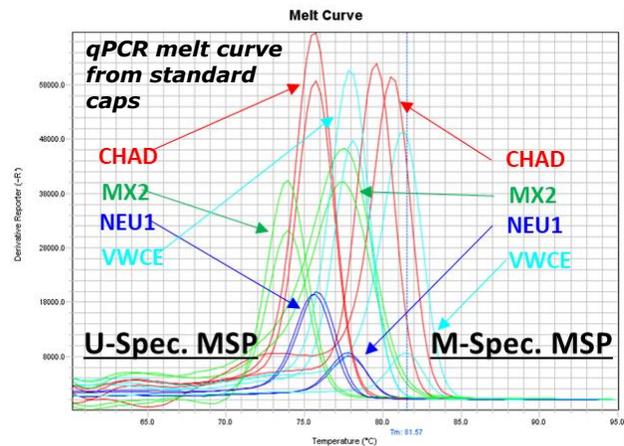
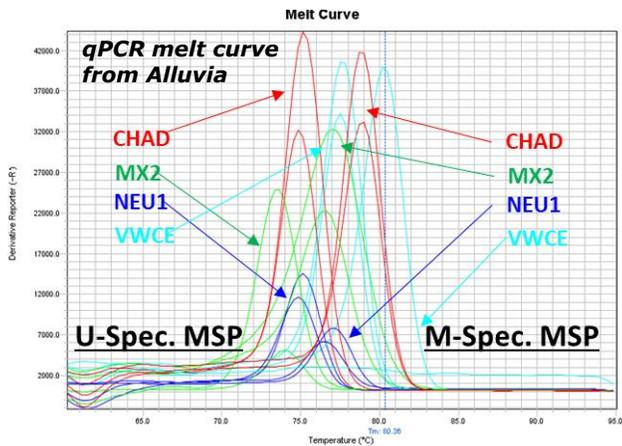


Onco M-Analysis Panel 8 DNA methylation status assay:

The KimanTech **Onco M-Analysis Panel 8** is a 2-step MSP (Methylation Specific PCR) assay that can determine the methylation status at four genomic loci near the translational start site of the following cancer-related genes:

VWCE MX2 NEU1 CHAD

The assay is prepackaged by lyophilizing the primers, dNTPs, buffer, and Taq polymerase in both the preamplification (multiplex) PCR tube and the 2nd-step (nested) PCR tube strip before attachment to the Alluvia PLM consumable. The 2-step qPCR process used by the assay improves sensitivity an average of 30-fold and up to 300-fold compared to single-step qPCR (see www.kimantech.com – Applications – "[1-Step vs 2-Step PCR for DNA Methylation Detection](#)"). The data below demonstrate that the Alluvia System produces similar qPCR results as standard PCR tube strip caps but with all the benefits described above.

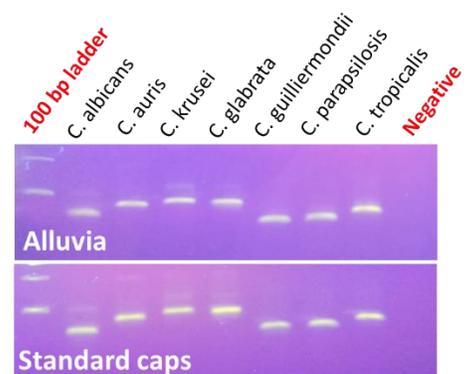
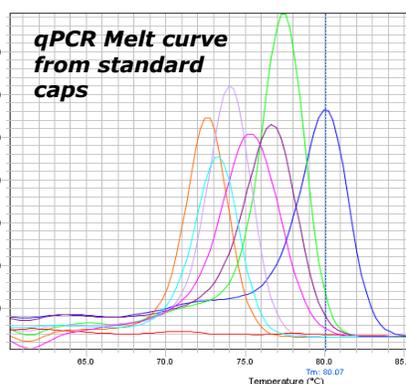
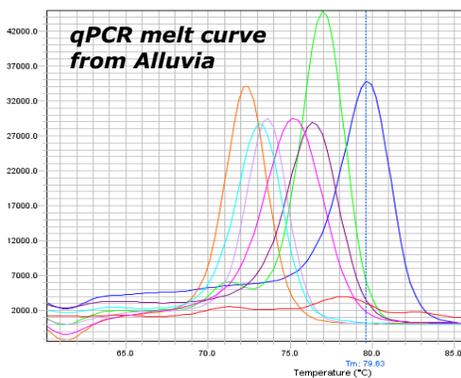


Candida P-Detection Panel 8 pathogen detection assay:

The KimanTech **Candida P-Detection Panel 8** is a prepackaged multiplex-nested qPCR assay (targeting the 26S ribosomal RNA gene) that can detect and differentiate the following seven pathogenic species of the *Candida* genus of yeast:

C. albicans *C. krusei* *C. guilliermondii* *C. parapsilosis*
C. auris *C. glabrata* *C. tropicalis*

This 2-step qPCR process improves specificity compared to single-step qPCR (see www.kimantech.com – Applications – "[1-Step vs 2-Step PCR for Pathogen DNA Detection from Whole Blood](#)"). The data below demonstrate that the Alluvia System produces similar results as standard PCR tube strip caps but with all the benefits described above.



Alluvia™ Assay Platform

Improved Specificity & Sensitivity - Continuous Containment