

# Mutation detection using the TaqMan Liquid Biopsy dPCR Assays on the Combinati Absolute Q dPCR System

## Introduction

Oncogenic mutations that are present in low abundance can be detected and quantified using Applied Biosystems™ TaqMan® Liquid Biopsy dPCR Assays combined with digital analysis on the Combinati™ Absolute Q™ dPCR System. This quick reference protocol provides instructions for running wet lab-verified TaqMan dPCR Liquid Biopsy Assays on the Combinati Absolute Q dPCR System.

The reaction setup shown below is recommended for rare-allele detection and accommodates running two technical replicates. For mutation rates lower than 1%, additional replicates may be required to achieve robust detection.



Material	Volume per reaction	Volume per 2 reactions*	Final concentration
Combinati 5X master mix	2 µL	4.4 µL	1X
20X TaqMan dPCR Assay**	0.5 µL	1.1 µL	1X
DNA sample/water†	Variable	Variable	1 ng/µL
<b>Total volume</b>	<b>10 µL††</b>	<b>22 µL</b>	–

\* Volume includes 10% excess to compensate for volume loss during pipetting.

\*\* Dilute to 20X prior to reaction mix preparation.

† Depending on sample source, required input DNA may vary.

†† For the Combinati Absolute Q dPCR System, prepare 10 µL per reaction.

Temperature	Time	Number of cycles
96°C	3 min	1
96°C	0 sec**	50†
58°C*	0 sec**	

\* Annealing temperature may be optimized as needed.

\*\* Ultrafast protocol with 0 sec settings is intended to increase specificity and reduce false positives.

† Increasing the total number of cycles may boost final amplitude of positive partitions and may be optimized as needed.

## dPCR settings

When using Combinati Absolute Q control software, be sure to select the appropriate dye set—Applied Biosystems™ FAM™ or VIC™ dye when setting thermal cycling protocol. For more detailed instructions specific to preparing and performing a dPCR experiment on the Combinati Absolute Q dPCR System, please refer to the user manual.

Find out more about the Combinati Absolute Q dPCR System at [combinati.com](http://combinati.com).



A complete list of assays is available at [thermofisher.com/digitalpcrliquidbiopsy](http://thermofisher.com/digitalpcrliquidbiopsy)

These assay probes are labeled with FAM and VIC dyes.

## Ordering information

Product	No. of reactions	Conc.	Cat. No.
TaqMan dPCR Liquid Biopsy Assays	375	40X	A44177

Find out more at [thermofisher.com/digitalpcrliquidbiopsy](http://thermofisher.com/digitalpcrliquidbiopsy)

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