

# Accuris™ qMAX cDNA Synthesis Kit

## Description

High quality, qPCR ready DNA is quickly generated with the Accuris qMax cDNA Synthesis kit. A blend of hexamer and oligo (dT) primers ensures unbiased and reproducible synthesis with true, relative cDNA representation. The exceptionally thermostable qMax Reverse Transcriptase combined with a potent RNase inhibitor allows for transcription to take place at higher temperatures (alleviating secondary structure problems) and maintains the integrity of the total RNA. The 5X buffer provides the perfect environment for highly efficient cDNA synthesis and greater yields. The buffer is optimized for superior data accuracy and reproducibility with limited starting material and low-copy templates.

-Unbiased, complete sequence representation from 4pg to 0.5µg of total RNA

-Thermostable reverse transcriptase and optimized next generation buffer system provide consistent, high yield product

Upon receipt, immediately store at -20°C. Avoid excessive freeze/thaw cycles. When stored as directed, this product will retain its activity for 12 months from date of receipt. The product may also be stored at 4°C for up to one month.

## Limitations of Use

For research purposes only. Not intended for therapeutic or diagnostic use.

## Quality Control

Accuris enzymes and reagents are tested under general assay conditions for activity, reproducibility, efficiency, heat activation, sensitivity, and absence of nuclease contamination and nuclease activity. This product is manufactured under a comprehensive quality management system, following ISO 9001:2008 standards.

Accuris is not responsible for consequential or incidental damages, direct or indirect, resulting from use of this product. Accuris guarantees the performance of this product as described when used in accordance with these instructions.

## General Guidelines

### Buffer

The cDNA Synthesis Kit is supplied with a specially formulated 5X buffer. This buffer has been optimized to work with the RT provided in the kit and contains a ratio of anchored oligo (dT) primers and random hexamers determined to produce a nonbiased population of cDNA. High quality cDNA can be produced with maximum efficiency using this buffer and RT. The use of other additives is not required or recommended.

### Template

Accuris qMax RT generates very high cDNA yields from small amounts of starting material. The cDNA Synthesis Kit works optimally with 4.0pg to 0.5µg of total RNA or oligo(dT) purified mRNA.

### Reaction conditions

Most reactions can be carried out at a temperature of 42°C for 30 minutes. When working with templates that have a high GC content (above 65%), the temperature can be increased, up to 55°C, to alleviate any problems associated with secondary structure.

### Analysis by qPCR

A cDNA synthesis reaction produces enough cDNA for analysis by real time PCR as well as other down stream processing reactions. The cDNA may be diluted 10X in PCR grade water prior to qPCR, however, the optimum dilution should be determined based on target gene abundance. For a 20µl qPCR reaction, using 2.0 to 5.0µl of the cDNA solution is recommended. cDNA may be stored at 4°C for 1 week or -20°C longer term.

## Technical Support

For trouble-shooting and tech support, contact us at [info@accuris-usa.com](mailto:info@accuris-usa.com) or call 908 769-5555.

10/20 SD

## Reaction Setup

Thaw the 5X buffer and prepare your reaction in a 0.2ml tube as below:

Component	20 µl reaction	Final concentration/Notes
5X cDNA Synthesis Reaction Buffer	4 µl	1X
20X qMax Reverse Transcriptase	1µl	1X Add before total RNA
Total RNA, 4pg - 0.5µg	Variable	Add up to 2.0µg for low copy genes
PCR grade water	to final reaction volume	

For other volumes, adjust the amount of each component accordingly.

### Protocol

1. Incubate tube from above at 42°C for 30 minutes. For RNA with a high degree of secondary structure, incubate at 55°C.
2. Denature the RT by incubating at 85°C for 10 minutes.

The resulting cDNA can be diluted 10x in PCR-grade water prior to qPCR, however the optimum dilution should be determined based on target gene abundance. We recommend 2µl to 5µl of the cDNA solution per 20µl real-time PCR reaction. Alternatively, cDNA may be stored at 4°C for 1 week or -20°C for long term storage.

Accuris offers a full line of PCR enzymes and master mixes. Visit [www.accuris-usa.com](http://www.accuris-usa.com) for details.

## Package contents and reordering

The Accuris qMax cDNA Synthesis Kit is available in 25, 100 and 250 reaction packs. Kit includes 20X reverse transcriptase with RNase inhibitor and 5X reaction buffer with primers.

### Accuris qMax cDNA Synthesis Kit, sample pack, 5 reactions

Catalog number PR2100-C-S  
Includes 5µl of 20X RT and 20µl 5X buffer.

### Accuris qMax cDNA Synthesis kit, 25 rxns

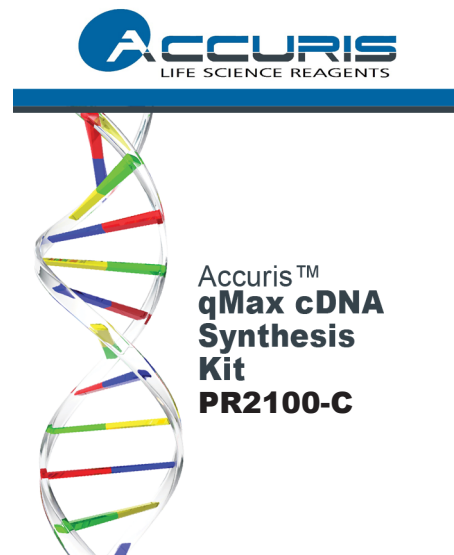
Catalog number PR2100-C-25  
Includes 25µl of 20X RT and 100µl 5X buffer.

### Accuris qMax cDNA Synthesis kit, 100 rxns

Catalog number PR2100-C-100  
Includes 100µl of 20X RT in 25µl aliquots and 400µl 5X buffer in 100µl aliquots.

### Accuris qMax cDNA Synthesis kit, 250 rxns

Catalog number PR2100-C-250  
Includes 250µl of 20X RT in 25µl aliquots and 1ml 5X buffer in 100µl aliquots.



**ACCURIS**  
LIFE SCIENCE REAGENTS

Accuris™  
**qMax cDNA  
Synthesis  
Kit  
PR2100-C**

Reverse Transcriptase and Buffer  
Package contains:  
25µl of 20X Reverse Transcriptase and  
100µl of 5X cDNA Synthesis Buffer  
25 reactions, Based on 20µl total reaction volume  
Store at -20°C upon receipt  
PH: 908.769.5555 EM: [Info@accuris-usa.com](mailto:Info@accuris-usa.com)