For general laboratory use.

Print Protocol | Print Changes to Previous Version | Print Safety Precautions | Print License Disclaimer

LightCycler® EvoScript RNA Probes Master

Version 01

Content version: December 2015

Easy-to-use reaction mix for one-step RT-qPCR using the LightCyler® 480 or the LightCycler® 96 Real-Time PCR Systems

Cat. No. 07 800 029 001	1 kit 200 reactions of 20 µl final volume each
Cat. No. 07 800 096 001	1 kit 1,000 reactions of 20 µl final volume each

Store the kit at −15 to −25°C!

www.lifescience.roche.com

Table of Contents

1. What this Product Does

Number of Tests

The kit is designed for 200 or 1,000 reactions with a final reaction volume of 20 µl each.

Kit Contents

Vial/ Cap	Label	Function	Catalog No.	Content
1 blue	Master Mix, 5× conc.	Contains enzymes for reverse transcription and PCR, RT-qPCR Reaction Buffer, dATP, dCTP, dGTP, and dUTP, $Mg(OAc)_2$, and proprietary additives	07 800 029 001 07 800 096 001	2 vials, 440 µl each 10 vials, 440 µl each
2 color-less	Water, PCR grade	To adjust the final reaction volume.	07 800 029 001 07 800 096 001	3 vials, 1 ml each 2 vials, 7.25 ml each

Storage and Stability

This kit is shipped on dry ice.

Store the kit at –15 to –25°C.

Kit components are stable at -15 to -25°C until the expiration date printed on the label.

The kit is stable at +2 to +8°C for 4 weeks.

Vial/ Cap/ Bottle	Label	Storage and Stability
1 blue	Master, 5× conc.	⚠ Close lid immediately after use. ⚠ Avoid temperature fluctuations (> 5 ×). To avoid temperature fluctuations, aliquot Vial 1 and store at -15 to -25°C or store at +2 to +8°C for up to 4 weeks.

Working Solution	Storage
Everything combined, except RNA template.	Although we recommend working on ice and preparing the reagents right before use, the working solution is stable at +15 to +25°C for up to 4 hours, and is therefore ideal for use in automated workflows.

Additional Equipment and Reagents Required

- Standard laboratory equipment
- Nuclease-free pipette tips
- 1.5 ml RNase-free microcentrifuge tubes to prepare master mixes and dilutions.

For RT-qPCR:

- Real-Time PCR systems such as LightCycler® 480 or LightCycler® 96 Instrument.*
- LightCycler® 480 Multiwell Plate 96* or 384*
- LightCycler® 8-Tube Strips*
- Standard swinging-bucket centrifuge with rotor for multiwell plates

- For RT-qPCR primer and probe design:
  Universal ProbeLibrary Assay Design Center at
  www.universalprobelibrary.com

Optional

For RNA purification

- MagNA Pure 96 Instrument* including Disposables
- MagNA Pure 96 Internal Control Tube* I
- MagNA Pure 96 DNA and Viral NA Kit, Large Volume* or
- MagNA Pure 96 DNA and Viral NA Kit, Small Volume*

Alternatively, use other nucleic acid purification instruments and manual sample preparation products such as:

- MagNA Pure LC 2.0 Instrument* with MagNA Pure LC Total Nucleic Acid Isolation Kit - High Performance*
- MagNA Pure Compact Instrument* with MagNA Pure Compact Nucleic Acid Isolation Kit I*
- High Pure Viral Nucleic Acid Kit*
- High Pure RNA Isolation Kit*
- High Pure FFPET RNA Isolation Kit*

For amplicon carryover contamination control

- LightCycler® Uracil-DNA Glycosylase*

Application

The LightCycler® EvoScript RNA Probes Master is designed for sensitive, high-specificity, high-precision one-step RT-qPCR especially for gene expression assays.

The 1-vial composition is ideally suited for easy reaction assembly, requiring only the addition of primers, probe and target RNA. The proprietary reaction buffer allows a convenient hot start RT-qPCR. In addition, the enzymes for reverse transcription and for PCR feature hot start for premium specificity[1)]. The master mix is optimized for hydrolysis probes, including Universal ProbeLibrary (UPL) probes and does not require optimization with $Mg(OAc)_2$.

[1)] The reverse transcription activity will be suppressed at temperatures significantly below 60°C.

Assay Time

When using the recommended thermal profile on the LightCycler® 480 System or LightCycler® 96 System, the LightCycler® EvoScript RNA Probes Master run time is approximately 90 minutes. The RT-qPCR thermal profile includes a 15 minute reverse transcription step and 45 cycles of PCR.

2. How to Use this Product

2.1 Before You Begin

Precautions

Always use RNase-free techniques. Nuclease contaminated reagents and reaction vessels will degrade template RNA. Please follow these guidelines to minimize risk of contamination:

- Wear disposable gloves and change them frequently.
- Avoid touching surfaces or materials that could cause nuclease carry-over.
- Use only reagents provided in this kit. Substitutions may introduce nucleases.
- Clean and decontaminate work areas and instruments, including pipettes, with commercially available decontamination reagents.
- Use only new RNase-free aerosol-blocking pipette tips and siliconized microcentrifuge reaction tubes.
- Use a work area specifically designated for nucleic acid work, and if possible use reaction vessels and pipettes dedicated only for work with template RNA.
- To minimize risk of RNase contamination, autoclave all vessels.

Sample Material

Use any template RNA suitable for RT-qPCR in terms of purity, concentration, and absence of RT-PCR inhibitors. For reproducible isolation of nucleic acids, use:

- Either the MagNA Pure LC 2.0 Instrument*, the MagNA Pure Compact Instrument*, or the MagNA Pure 96 Instrument*, and a dedicated MagNA Pure Nucleic Acid Isolation Kit* (for automated isolation), or a High Pure Nucleic Acid Isolation Kit* (for manual isolation).

Negative Control

Always run a negative control with the samples. To prepare a negative control, replace the template RNA with Water, PCR Grade (Vial 2). Contamination problems can be identified using negative control reactions.

Primers

Suitable concentrations of PCR primers range from 0.2 to 0.5 µM (final concentration in RT-qPCR). The recommended starting concentration is 0.2 µM each.

Probe

Suitable concentrations of hydrolysis probes range from 0.05 to 0.5 µM (final concentration in PCR). The recommended starting concentration is 0.1 µM each.

For best results, design hydrolysis probes with a higher Tm than the Tm of the assay primers.

$Mg(OAc)_2$

The master mix is optimized with a fixed concentration of $Mg(OAc)_2$, which works with nearly all primer combinations. There is no need for adjustment.

2.2 Protocol

LightCycler® 480 and LightCycler® 96 System Protocol

The following procedure is optimized for use with the corresponding LightCycler® System you are using.

⚠ Program the LightCycler® Instrument before preparing the reaction mixes.

A LightCycler® Instrument protocol that uses the LightCycler® EvoScript RNA Probes Master contains the following programs:

- **Reverse Transcription** of template RNA
- **Activation** of hot start Taq DNA Polymerase
- **Amplification** of the cDNA
- **Cooling** of the thermal block

For details on how to program the experimental protocol, see the current LightCycler® 480 Instrument Operator's Manual or the LightCycler® 96 System Operator's Guide.

A) Protocol for use with the LightCycler® 480 Instrument II (Multiwell Plate 96 or 384)

The following table shows the parameters that must be programmed for an RT-qPCR run using the LightCycler® EvoScript RNA Probes Master on the LightCycler® 480 Instrument II (Multiwell Plate 96 or 384).

Setup				
Block Type		**Reaction volume [µl]**		
96 (384)		20 (10)		
Detection Format		**Excitation Filter**	**Emission Filter**	
For example: Hydrolysis Probe or UPL Probe FAM		465	510	
For new customized detection formats, set for all selected filters in the "Selected Filter Combination List" (under Tools), the following values:				
Melting Factor		1		
Quantification Factor		10		
Integration Time		2		
Programs				
Program Name		**Cycles**	Analysis Mode	
Reverse Transcription		1	None	
Initial Denaturation		1	None	
Amplification		45[1)]	Quantification	
Cooling		1	None	
Temperature Targets				
Target [°C]	**Acquisition Mode**	**Hold [hh:mm:ss]**	**Ramp Rate [°C/s]**	**Acquisitions [per °C)]**
Reverse Transcription				
60[2)]	None	00:15:00	4.4 (4.8)	–
Initial Denaturation				
95	None	00:10:00	4.4 (4.8)	–
Amplification				
95	None	00:00:15	4.4 (4.8)	–
58	Single	00:00:30	2.2 (2.5)	–
Cooling				
40	None	00:00:30	2.2 (2.5)	-

[1)] 45 cycles is suitable for most assays. If the assay shows steep amplification curves and early crossing points, 40 cycles should be sufficient. Reducing the number of cycles will improve uniformity of the product and reduce the time required for the assay.

[2)] The LightCycler® EvoScript RNA Probes Master includes a reverse transcriptase featuring hot start. The reverse transcription activity will be suppressed at temperatures significantly below 60°C.

Color Compensation Protocol for the LightCycler® 480 Instrument II

For multicolor measurements, the application of a color compensation file is necessary to compensate for optical crosstalk between the different channels. For the LightCycler® 480 Instrument II, an instrument-specific color compensation file is mandatory for multicolor experiments, and a color compensation object can be generated as shown below:

The LightCycler® 480 Instrument II protocol contains the following program:

- **Reverse Transcription** of template RNA
- **Initial Denaturation** of thermostable DNA Polymerase
- **Amplification** of the cDNA
- **Temperature Gradient Step** to create the Color Compensation file
- **Cooling** of the thermal block

For details on how to program the experimental protocol, see the LightCycler® 480 Software Operator's Manual, Version 1.5.

Programming a Customized Detection Format for the LightCycler® 480 System Filter Combination Selection

The Detection Format in the LightCycler® 480 Software, Version 1.5 setup must be customized for the applied multicolor hydrolysis probe format used in the RT-qPCR Detection. In the "Tool" module, the "Detection Formats" option allows creating a new detection format specified by the user, including a "Detection Format" list, a "Filter Combination" selection area, and a "Selected Filter Combination List". Different filter settings for the LightCycler® 480 II Instrument are defined.

Example for 3-color Hydrolysis Probes

The following table shows the RT-qPCR parameters that must be programmed for a LightCycler® 480 Color Compensation file with a LightCycler® 480 Multiwell Plate 96.

Setup				
Block Type		**Reaction Volume [µl]**		
96		20		
Detection Format	Excitation Filter	Emission Filter		
FAM	465	510		
Red 610	533	610		
Cy 5	618	660		
For new customized detection formats, set for all selected filters in the "Selected Filter Combination List" (under Tools), the following values:				
Melting Factor	1			
Quantification Factor	10			
Integration Time	2			
Programs				
Program Name	**Cycles**	**Analysis Mode**		
Reverse Transcription	1	None		
Initial Denaturation	1	None		
Amplification	45	Quantification		
Temperature Gradient Step	1	Color Compensation		
Cooling	1	None		
Temperature Targets				
Target [°C]	**Acquisition Mode**	**Hold [hh:mm:ss]**	**Ramp Rate**	**Aquisitions [per °C]**
Reverse Transcription				
60	None	00:15:00	4.4	
Initial Denaturation				
95	None	00:10:00	4.4	
Amplification				
95	None	00:00:15	4.4	
58	Single	00:00:30	2.2	
Temperature Gradient Step				
95	None	00:00:10	4.4	
40	None	00:00:10	2.2	
95	Continous			5 Acq./ °C
Cooling				
40	None	00:00:30	2.2	

Preparation of the Color Compensation Run

Prepare the calibrator RT-qPCR mix for more than one reaction. Multiply the amount in the volume column by the number of reactions you need (minimum of 3 to 5 replicates) plus additional reactions since there will be a slight loss of liquid during the pipetting steps. In order to ensure accuracy, do not pipette volumes less than 1 µl when adding the individual reagents.

For each dye, set up the following reactions:

Reagent	Buffer Control	For Each Dye
LightCycler® EvoScript RNA Probes Master, 5× conc. (Vial 1)	4.0 µl	4.0 µl
Detection mix for each dye	-	X µl (depending on the assay)
Water, PCR grade (Vial 2)	16.0 µl	Y µl (depending on the assay)
Template, such as positive samples eluates	-	5.0 µl
Total Volume	**20 µl**	**20 µl**

Step	Action
❶	Pipette the replicates of each different calibrator mix into a pre-cooled LightCycler® 480 Multiwell Plate 96.
❷	Seal the LightCycler® 480 Multiwell Plate using a sealing foil.
❸	Place the Multiwell Plate in a standard swinging-bucket centrifuge containing a rotor for multiwell plates with suitable adaptors. Balance it with a suitable counterweight (*e.g.,* another plate), and centrifuge for 2 minutes at 1,500 × g.
❹	Load the multiwell plate into the LightCycler® 480 Instrument II and start the program.

Create Color Compensation Object

When the experiment is finished, open the **Sample Editor**. Select workflow **Color Comp** and designate the used positions of the Multiwell Plate as "Water" for buffer replicates, and the appropriate dyes respectively (*e.g.*, FAM, Red610, Cy5 for the example mentioned above).

Open the **Analysis** module "Color Compensation", click on **Calculate**, and save the color compensation object in the database.

From this point on, you can apply this "CC Object" to each multicolor experiment performed with FAM, Red610, and Cy5 on the same instrument.

B) Protocol for use with the LightCycler® 96 Instrument

Run Editor			
Detection Format			**Reaction Volume (µl)**
For example: Dyes 1: FAM			20
Programs			
Temp. [°C]	**Ramp Rate [°C/s]**	**Duration [s]**	**Acquisition Mode**
Reverse Transcription			
60[1)]	4.4	900	None
Initial Denaturation			
95	4.4	600	None
2-Step Amplification			
No. of Cycles: 45[2)]			
95	4.4	15	None
58	2.2	30	Single

[1)] The LightCycler® EvoScript RNA Probes Master includes a Reverse Transcriptase featuring hot start. The reverse transcription activity will be suppressed at temperatures significantly below 60°C.

[2)] 45 cycles is suitable for most assays. If the assay shows steep amplification curves and early crossing points, 40 cycles should be sufficient. Reducing the number of cycles will improve uniformity of the product and reduce the time required for the assay.

Color Compensation Protocol for the LightCycler® 96 Instrument

The LightCycler® 96 Instrument does not require the creation of a color compensation object.

Setup of the RT-qPCR Reaction for the LightCycler® 480 and LightCycler® 96 Instruments

Follow the procedure below to prepare at least ten 20 µl standard reactions.

Do not touch the surface of the LightCycler® 480 Multiwell Plate.

1. Thaw the solutions and, to ensure recovery of all the contents, briefly spin vials in a microcentrifuge before opening.
   Mix carefully by pipetting up and down or vortexing briefly. Place samples on ice.
2. Prepare a 20× conc. solution of your primers and a 20× conc. solution of your probes.
3. In a 1.5 ml reaction tube, prepare the RT-qPCR Mix and put on ice. For best results, prepare at least 10 reactions in order to reduce pipetting errors. To prepare more reactions, multiply the amount in the "Volume 1 Reaction" column below by the number of reactions to be run, plus at least one additional reaction.

Reagent	Volume 1 Reaction	Volume 10 Reactions	Final Conc.
Water, PCR grade (Vial 2)	9 µl	90 µl	-
LightCycler®EvoScript RNA Probes Master, 5× conc. (Vial 1)	4 µl	40 µl	1×
Primer Mix, 20×	1 µl	10 µl	1×
Probe Mix, 20×	1 µl	10 µl	1×
Total volume	**15 µl**	**150 µl**	

4. Mix carefully by pipetting up and down or vortexing briefly. Place on ice.

   Although we recommend working on ice and preparing the reagents right before use, the working solution (everything combined except RNA template) is stable at +15 to +25°C up to 4 hours, and is therefore ideal for use in automated workflows.
5. Prepare the RNA sample.
6. Pipette 15 µl RT-qPCR Mix into a precooled multiwell plate or precooled LightCycler® 8-Tube Strip
   - Add 5 µl of the RNA template
   - Seal multiwell plate with LightCycler® 480 Sealing Foil or LightCycler® 8-Tube Strips using the appropriate caps.
7. Place the Multiwell Plate 96 into a standard swinging-bucket centrifuge with a suitable adapter and balance it with a suitable counterweight (e.g., another multiwell plate), or place the 8-Tube Strips into a standard Multiwell Plate 96 and balance them in the centrifuge.
   - Centrifuge at 1,500 × *g* for 0.5 - 2 minutes.
8. Load the reaction vessels into the LightCycler® 480 or LightCycler® 96 Instrument.

9 Start the RT-PCR program described above.
If you use reaction volumes other than 20 µl, be sure to adapt the right volume in the running protocol. To start, we recommend using the same hold times as for the 20 µl volume.

Prevention of Carryover Contamination

LightCycler® EvoScript RNA Probes Master contains dUTP in the nucleotide mixture and is compatible with Uracil-DNA glycosylase (UNG) for amplicon carryover contamination control. If amplicon contamination control is desired, add 2 U per reaction LightCycler® Uracil-DNA Glycosylase* to the RT-qPCR amplification.

2.3 Quality Control

Each lot of the LightCycler® EvoScript RNA Probes Master is tested to meet specifications of the RT-qPCR using an RT-qPCR assay on the LightCycler® 480 Instrument II.

3. Results

The following results were obtained using the LightCycler® EvoScript RNA Probes Master on the LightCycler® 480 Instrument II. A singleplex reaction using primers and hydrolysis probes specific for HER3 (FAM) was run.

FAM channel (465/510)

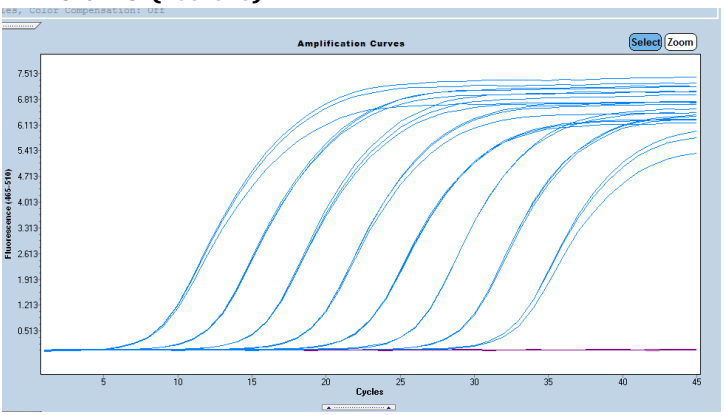

Fig. 1: The FAM channel shows the results for HER3. Amplification curves shown in blue were obtained from dilutions of $1e^2$ copies (far right), $1e^3$ copies, $1e^4$ copies, $1e^5$ copies, $1e^6$ copies, $1e^7$ copies, $1e^8$ copies, and $1e^9$ copies (far left) HER3 transcript per well, including a no template control (purple, flat line). Singleplex RT-qPCR was performed in a reaction volume of 20 µl per well in a LightCycler® 480 Multiwell Plate 96.

4. Troubleshooting

	Possible Cause	Recommendation
Increase specificity		Some assays show higher specificity when using a higher reverse transcription temperature and/or higher annealing temperature.
Fluorescence intensity varies	Some of the reagent is still in the upper part of the microwell/8-tube strip, or an air bubble is trapped in the microwell/8-tube strip.	Repeat centrifugation, but allow sufficient centrifugation time so all reagent is at the bottom of the microwell/8-tube strip and air bubbles are expelled.
	Skin oils or dirt on the surface of the microwell/ 8-tube strip.	Always wear gloves when handling the multiwell plate/8-tube strip.
Fluorescence intensity is very low	Low concentration or deterioration of dyes in the reaction mixtures because dye was not stored properly.	• Keep dye-labeled reagents away from light. • Store the reagents at –15 to –25°C and avoid repeated freezing and thawing.
	Poor PCR efficiency (reaction conditions not optimized).	• Primer concentration should be in the range of 0.2 to 0.5 µM, probe concentration should be in the range of 0.05 to 0.5 µM and lower than the primer concentration. • Check annealing temperature of primers and probes. • Optimize annealing temperature in the reverse transcription step or in the PCR reaction. • Always run a positive control along with your samples.
	Chosen imaging time is too low.	• Choose the appropriate detection format in combination with “dynamic” detection mode or • Increase imaging time when using “manual” detection mode. For details, see LightCycler® 480 Software Instrument Operator's Manual.
	RT-qPCR primers and probes are not optimized.	• Check sequence and location of the hydrolysis probe on the PCR product. • Check RT-qPCR product on an agarose gel.
	PCR has not been optimized.	• Check primer design (quality). • Check RT-qPCR product on an agarose gel.

	RNA is degraded during isolation or improper storage.	• If possible, check RNA quality. • Check RNA with an established RT-qPCR primer when available.
	Pipetting errors and omitted reagents.	• Check for missing reagents. • Check the pipetting procedure.
	Impure sample material inhibits reaction.	• Dilute sample 1:10 and repeat the analysis. • Re-purify the nucleic acids to ensure removal of inhibitory agents.
Negative control sample gives a positive signal	Contamination	Remake all critical reaction mixes. Be sure to use special RT-qPCR setup working areas.

5. Additional Information on this Product

Principle

The LightCycler® EvoScript RNA Probes Master consists of 2 different vials:

- Vial 1: LightCycler® EvoScript RNA Probes Master, 5× conc.
- Vial 2: Water, PCR Grade

The kit also provides sufficient numbers of vials containing Water, PCR Grade to ensure that fresh (unopened) vials can be used. This minimizes the risk of contamination of RT-qPCR reaction mixes with RNases and other substances.

The resulting RT-qPCR reaction mix also has a hot start Taq DNA Polymerase, nucleotides, and additives ensuring a hot start amplification system with high specificity. The mix contains an optimized concentration of $Mg(OAc)_2$, eliminating the need for additional adjustments. For greater convenience, the RT-qPCR mixture can be used for both RNA and/or DNA templates in parallel.

6. Supplementary Information

6.1 Conventions

6.1.1 Text Conventions

To make information consistent and easier to read, the following text conventions are used in this document:

Text Convention	Usage
Numbered instructions labeled ❶, ❷ etc.	Steps in a procedure that must be performed in the order listed.
Asterisk *	Denotes a product available from Roche Diagnostics.

6.1.2 Symbols

In this document, the following symbols are used to highlight important information:

Symbol	Description
	Information Note: Additional information about the current topic or procedure.
	Important Note: Information critical to the success of the procedure or use of the product.

6.2 Changes to Previous Version

- First version.

6.3 Ordering Information

Roche offers a large selection of reagents and systems for life science research. For a complete overview of related products and manuals, please visit and bookmark our homepage www.lifescience.roche.com:

- LightCycler® 480 System: www.lightcycler480.com
- LightCycler® 96 System: www.lightcycler96.com
- Automated Sample Preparation (MagNA Pure LC System and MagNA Pure Compact System): www.magnapure.com
- Manual Sample Preparation of Nucleic Acids: www.lifescience.roche.com/shop/en/us/products/manual-sample-preparation-of-nucleic-acids

Instrument and Accessories

Product	Pack Size	Cat. No.
LightCycler® 480 Instrument II, 96 well	1 instrument (96 well)	05 015 278 001
LightCycler® 480 Instrument II, 384 well	1 instrument (384 well)	05 015 243 001
LightCycler® 480 Block Kit 96 Silver	1 block kit for 96-well PCR Multiwell Plates	05 015 219 001
LightCycler® 480 Block Kit 384 Silver	1 block kit for 384 -well PCR Multiwell Plates	05 015 197 001
LightCycler® 480 Multiwell Plate 96, white	5 × 10 plates with sealing foils	04 729 692 001
LightCycler® 480 Multiwell Plate 384, white	5 × 10 plates with sealing foils	04 729 749 001
LightCycler® 480 Sealing Foil	50 foils	04 729 757 001
LightCycler® 480 Software, Version 1.5	1 software package	04 994 884 001
LightCycler® 96 Instrument	1 instrument	05 815 916 001
LightCycler® 8-Tube Strips (white) 10×	12 white strips and clear caps	06 612 601 001
LightCycler® 8-Tube Strip Adapter Plate	1 adapter plate	06 612 598 001
MagNA Pure 96 Instrument	1 instrument plus accessories	06 541 089 001
MagNA Pure 96 Internal Control Tube	150 tubes (15×10)	05 435 293 001
MagNA Pure LC 2.0 Instrument	1 instrument plus accessories	05 197 686 001

	Product	Pack Size	Cat. No.
	MagNA Pure Compact Instrument	1 instrument plus accessories	03 731 146 001
Nuceic Acid Isolation Kits	MagNA Pure 96 DNA and Viral NA Small Volume Kit	3 sets for 192 isolations each	06 543 588 001
	MagNA Pure 96 DNA and Viral NA Large Volume Kit	3 sets for 96 isolations each	06 374 891 001
	MagNA Pure LC Total Nucleic Acid Isolation Kit - High Performance	1 kit for up to 288 isolations	05 323 738 001
	MagNA Pure Compact Nucleic Acid Isolation Kit I	1 kit for 32 isolations	03 730 964 001
Associated Kits and Reagents	LightCycler® Uracil-DNA Glycosylase	50 µl 100 U (2 U/µl)	03 539 806 001
	High Pure Viral Nucleic Acid Kit	1 kit for up to 100 purifications	11 858 874 001
	High Pure RNA Isolation Kit	1 kit for up to 50 purifications	11 828 665 001
	High Pure FFPET RNA Isolation Kit	1 kit for up to 50 purifications	06 650 775 001

6.4 Disclaimer of License

NOTICE: For patent license limitations for individual products please refer to www.technical-support.roche.com.

6.5 Trademarks

LIGHTCYCLER, MAGNA PURE, and HIGH PURE are trademarks of Roche.

All other product names and trademarks are the property of their respective owners.

6.6 Regulatory Disclaimer

For general laboratory use.

6.7 Safety Information

Please follow the instructions in the Safety Data Sheets (SDS)

Contact and Support

If you have questions or experience problems with this or any Roche product for Life Science, please contact our Technical Support staff. Our scientists are committed to providing rapid and effective help.
Please also contact us if you have suggestions for enhancing Roche product performance or using our products in new or specialized ways. Such customer information has repeatedly proven invaluable to the research community worldwide.

To ask questions, solve problems, suggest enhancements or report new applications, please visit our Online Technical Support Site.

Visit lifescience.roche.com, to download or request copies of the following Materials:

- Instructions for Use
- Safety Data Sheets
- Certificates of Analysis
- Information Material

To call, write, fax, or email us, visit lifescience.roche.com and select your home country to display country-specific contact information.

1215.**07830874001** ①

Roche Diagnostics GmbH
Sandhofer Strasse 116
68305 Mannheim
Germany