molecular probes life technologies

Qubit® microRNA Assay Kits Online Specials

For use with the Qubit® Fluorometer (all models)

Catalog nos. Q32880, Q32881

Table 1. Contents and storage

Material	Amount		Concentration	Storage	Stability
	Q32880 (100 assays)	Q32881 (500 assays)			
Qubit® microRNA Reagent (Component A)	250 µL	1.25 mL	200X concentrate in DMSO	• Room temperature • Do not freeze • Protect from light	When stored as directed, kits are stable for 6 months.
Qubit® microRNA Buffer (Component B)	50 mL	250 mL	Not applicable	• Room temperature • Avoid freeze/thaw cycles	
Qubit® microRNA Standard #1 (Component C)	1 mL	5 mL	0 ng/µL in TE buffer	• 2–8°C • Avoid freeze/thaw cycles	
Qubit® microRNA Standard #2 (Component D)	4 × 250 µL	10 × 500 µL	10 ng/µL in TE buffer		

Introduction

The Qubit® microRNA Assay Kit for use with the Qubit® 2.0 Fluorometer allows easy and accurate quantification of small RNA (~20 nucleotides or base pairs), even in the presence of common contaminants such as salts, free nucleotides, solvents, detergents, and protein, but only very small amounts of DNA (*Appendix*, Table 2, page 10). The assay is highly selective for small RNA over rRNA or large mRNA (>1000 nt) (Figure 1, page 2). We have been able to reproducibly quantify small RNA in pure samples at levels as low as 0.5 ng in the assay tube following the supplied protocol below. The assay detects all types of small RNA, including microRNA and siRNA, both single stranded and double stranded.

The assay accurately detects as little as 0.5 ng small RNA and has a dynamic range of 5 ng/mL to 500 ng/mL (1–100 ng) in the core assay range. The assay is accurate for initial sample concentrations from 0.05 ng/µL to 100 ng/µL. The kit provides concentrated assay reagent, dilution buffer, and pre-diluted small RNA standards. To perform the assay, simply dilute the reagent using the buffer provided, add your sample (any volume between 1 µL and 20 µL is acceptable), and read the concentration using the Qubit® Fluorometer.

To determine the purity of your sample, use the Qubit® microRNA Assay Kit together with the Qubit® dsDNA HS Assay Kit or the Qubit® dsDNA BR Assay Kit. To measure protein contamination in nucleic acid samples, simply run 1–20 µL of the sample in the Qubit® protein assay. These measurements give you a much better indication of sample purity than that produced by measuring the A_{260}/A_{280} ratio.

Note: For Qubit® 2.0 fluorometers purchased before June, 2014, the Qubit® microRNA assay requires the addition of the MyQubit microRNA assay to the Qubit® 2.0 Fluorometer. The assay file can be downloaded from the bottom of the Qubit® 2.0 Fluorometer web page (**www.lifetechnologies.com/qubit**) and permanently uploaded to your Qubit® 2.0 Fluorometer. The Qubit® 3.0 fluorometer comes pre-loaded with the assay.

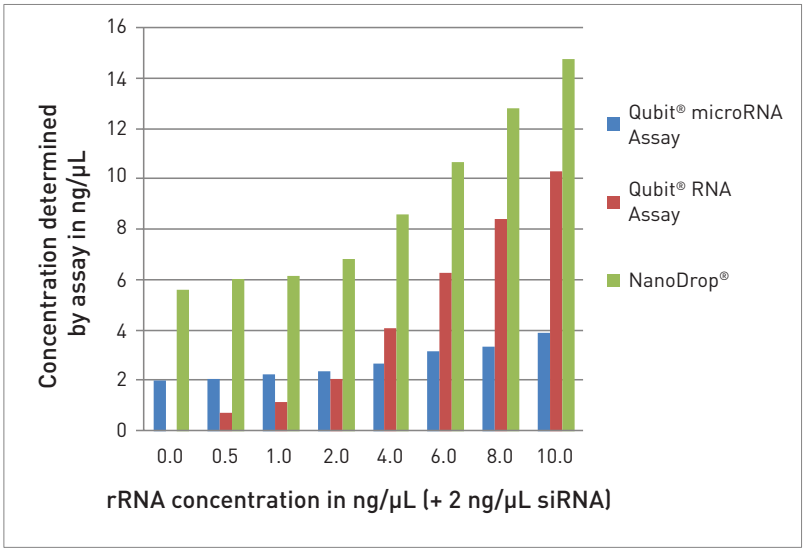

Figure 1. Comparison of detection techniques for accurate quantitation of small RNA in the presence of ribosomal RNA. rRNA at the concentrations listed was spiked into solutions containing 2 ng/µL siRNA, then read using the Qubit® microRNA assay, the Qubit® RNA assay, or by 260 nm absorbance (A260) on the NanoDrop® spectrophotometer.

Before You Begin

Materials required but not provided

- Plastic container (disposable) for mixing the Qubit® working solution (step 2.3)
- Qubit® Fluorometer
- Qubit® assay tubes (500 tubes, Cat. no. Q32856) or Axygen® PCR-05-C tubes (VWR, part no. 10011-830)

Storing the Qubit® microRNA Assay Kits

- The Qubit® microRNA reagent and buffer are designed for room temperature storage.
- The Qubit® microRNA reagent is supplied in DMSO, which freezes at temperatures lower than room temperature. Freezing does not harm the reagent; however, if the reagent is stored at a temperature colder than room temperature, it is important to warm it to room temperature and vortex briefly prior to use.
- The Qubit® microRNA reagent is sensitive to light. Store the vial **in the dark** when not in use.
- The Qubit® microRNA buffer may be stored at ≤6°C for long-term storage; however, it is important to warm the buffer to room temperature before using it in the assay.
- Store the RNA standards at 2–8°C.

RNAse-free Handling

The calibration standards included in the Qubit® microRNA Assay Kit are high-quality siRNA 21-mer standards (GAPDH siRNA). The integrity and concentration of these standards is critical to the optimal performance of the Qubit® microRNA assay. As such, we highly recommend treating the siRNA standards as you would any other precious RNA. Use appropriate RNAse-free handling techniques, including RNAse-free gloves, pipette tips, and tubes. Keep the tube lids closed whenever possible; do not touch the pipet to the inside wall of the tube when withdrawing a sample, and return the siRNA standard to the refrigerator as soon as possible after use.

Handling and Disposal

No data are currently available addressing the mutagenicity or toxicity of the Qubit® microRNA reagent (Component A). This reagent is known to bind nucleic acid and is provided as a solution in DMSO. Treat the Qubit® microRNA reagent with the same safety precautions as all other potential mutagens and dispose of the dye in accordance with local regulations.

Download the .qbt file from the web

Qubit® 2.0 Fluorometers purchased before June, 2014 require the addition of the MyQubit microRNA assay file to the instrument to run the Qubit® microRNA Assay.

Download the MyQubit microRNA assay file (microRNA assay.qbt) from **www.lifetechnologies.com/qubit** and save it directly to your PC. Then, transfer the file from your computer to the root directory of your USB drive. Ensure that you only have a single .qbt file on your USB drive before uploading it to the Qubit® 2.0 Fluorometer.

IMPORTANT! Downloading a .qbt file from the web directly to your USB drive may result in unexpected behavior.

Note: The Qubit® 3.0 Fluorometer and Qubit® 2.0 Fluorometers purchased after May, 2014 come pre-loaded with the assay file. No download is necessary for these instruments.

Upload the .qbt file to the Qubit® 2.0 Fluorometer

1.1 Make sure there is only one .qbt file on your USB drive.

1.2 With your Qubit® 2.0 Fluorometer unplugged, insert the USB drive containing the MyQubit microRNA Assay file (microRNA assay.qbt) into the USB port on the instrument.

1.3 Plug the Qubit® 2.0 Fluorometer back in to power it on. The instrument will display the following message: "microRNA assay.qbt file detected. Do you wish to upload?" Click **Yes** to proceed with the upload, which will take ~2 seconds.

1.4 Once the upload is complete, you will be directed to a new Home Screen displaying a new button called "microRNA", which indicates that the MyQubit microRNA assay is permanently uploaded to the instrument. You do not need the USB drive to access the assay. Functionality of the pre-existing assays is not affected in any way.

Calibrate the Qubit® Fluorometer

For each assay, you have the choice to run a new calibration or to use the values from the previous calibration. As you first use the instrument, perform a new calibration each time. As you become familiar with the assays, the instrument, your pipetting accuracy, and significant temperature fluctuations within your laboratory, determine the level of comfort you have using the calibration data stored in from the last time the instrument was calibrated. Remember also that the fluorescence signal in the tubes containing standards and the samples is stable for not longer than 3 hours. See Figure 2, below, for an example of the calibration curve used to generate the quantitation results.

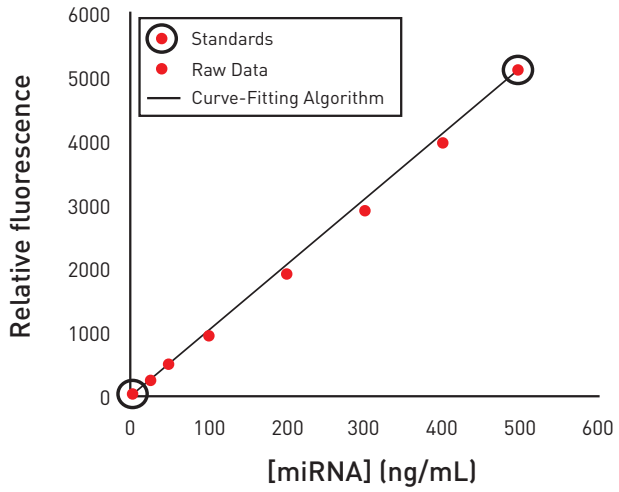

Figure 2. The plot showing the line corresponding to the curve-fitting algorithm (a Modified Hill plot) used to calculate concentration in the Qubit® microRNA Assay. For reference, the positions of the standards and a set of data points from an actual experiment are shown superimposed onto the line, demonstrating that the curve-fitting algorithm gives accurate values for quantitation.

Critical assay parameters

Assay temperature

The Qubit® microRNA assay delivers optimal performance when all solutions are at room temperature (22–28˚C). The Qubit® assays are designed to be performed at room temperature, and temperature fluctuations can influence the accuracy of the assay (Figure 3, below). To minimize temperature fluctuations, pre-warm the Qubit® microRNA reagent and the Qubit® microRNA buffer to room temperature and insert all assay tubes into the Qubit® Fluorometer only for as much time as it takes for the instrument to measure the fluorescence, because the instrument can raise the temperature of the assay solution significantly, even over a period of a few minutes. Do not hold the assay tubes in your hand before reading, as this will warm the solution and result in a low reading.

Incubation time

To allow the Qubit® assay to reach optimal fluorescence, incubate the tubes for 2 minutes after mixing the sample or standard with the working solution. After this incubation period, the fluorescence signal is stable for 3 hours at room temperature.

Photobleaching of the Qubit® reagent

The Qubit® reagents exhibit high photostability in the Qubit® Fluorometer, showing <0.3% drop in fluorescence after 9 readings and <2.5% drop in fluorescence after 40 readings. It is important to remember, however, that if the assay tube remains in the Qubit® Fluorometer for multiple readings, a temporary reduction in fluorescence will be observed as the solution increases in temperature (Figure 3, below). Note that the temperature inside the Qubit® Fluorometer may be as much as 3°C above room temperature after 1 hour. For this reason, if you want to perform multiple readings of a single tube, remove the tube from the instrument and let it equilibrate to room temperature for 30 seconds before taking another reading.

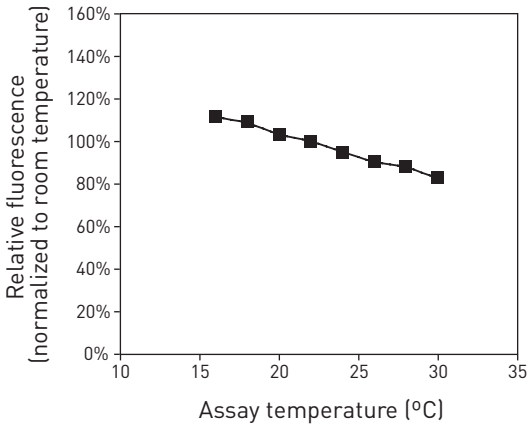

Figure 3. Plot of fluorescence vs. temperature for the Qubit® microRNA assay. The Qubit® assays are designed to be performed at room temperature, as temperature fluctuations can influence the accuracy of the assay.

Prepare samples and standards

The protocol below assumes you are preparing standards for calibrating the Qubit® Fluorometer. If you plan to use the last calibration performed on the instrument (see "Calibrate the Qubit® Fluorometer" on page 4), you need fewer tubes (step 2.1) and less working solution (step 2.3). For sample purity determinations, it is possible to use the Qubit® Fluorometer to calculate the amount of dsDNA and RNA in the same sample — simply perform each assay for your sample.

2.1 Set up the required number of 0.5-mL tubes you need for standards and samples. The Qubit® microRNA assay requires 2 standards.

Note: Use only thin-wall, clear 0.5-mL optical-grade real-time PCR tubes. Acceptable tubes include Qubit® assay tubes (500 tubes, Cat. no. Q32856) or Axygen® PCR-05-C tubes (VWR, part number 10011-830).

2.2 Label the tube lids.

Note: Label the lid of each standard tube correctly, as calibration of the Qubit® Fluorometer requires that the standards be introduced to the instrument in the right order.

2.3 Prepare the Qubit® working solution by diluting the Qubit® microRNA reagent 1:200 in Qubit® microRNA buffer. Use a clean plastic tube each time you make Qubit® working solution. **Do not mix the working solution in a glass container.**

Note: The final volume in each tube must be 200 µL. Each standard tube requires 190 µL of Qubit® working solution, and each sample tube requires anywhere from 180 µL to 199 µL. Prepare sufficient Qubit® working solution to accommodate all standards and samples.

For example, for 8 samples, prepare enough working solution for the samples and 2 standards: ~200 µL per tube in 10 tubes yields 2 mL of working solution (10 µL of Qubit® microRNA reagent plus 1,990 µL of Qubit® microRNA buffer).

2.4 Load 190 µL of Qubit® working solution into each of the tubes used for standards.

2.5 Add 10 µL of each Qubit® microRNA standard to the appropriate tube and mix by vortexing 2–3 seconds, being careful not to create bubbles.

Note: Careful pipetting is critical to ensure that exactly 10 µL of each Qubit® microRNA standard is added to 190 µL of Qubit® working solution.

2.6 Load Qubit® working solution into individual assay tubes so that the final volume in each tube after adding sample is 200 µL.

Note: Your sample can be anywhere between 1 µL and 20 µL, therefore, load each assay tube with a volume of Qubit® working solution anywhere between 180 µL and 199 µL.

2.7 Add each of your samples to assay tubes containing the correct volume of Qubit® working solution (prepared in step 2.6) and mix by vortexing 2–3 seconds. The final volume in each tube should be 200 µL.

2.8 Allow all tubes to incubate at room temperature for 2 minutes.

Proceed to "Read standards and samples"; follow the procedure appropriate for your instrument:

- "Qubit® 3.0 Fluorometer" on page 7
- "Qubit® 2.0 Fluorometer" on page 8

Read standards and samples

Qubit® 3.0 Fluorometer

3.1 On the Home screen of the Qubit® 3.0 Fluorometer, press **microRNA**. The "Read standards" screen is displayed. Press **Read Standards** to proceed.

Note: If you have already performed a calibration for the selected assay, the instrument prompts you to choose between reading new standards and running samples using the previous calibration. If you want to use the previous calibration, skip to step 3.4. Otherwise, continue with step 3.2.

3.2 Insert the tube containing Standard #1 into the sample chamber, close the lid, then press **Read standard**. When the reading is complete (~3 seconds), remove Standard #1.

3.3 Insert the tube containing Standard #2 into the sample chamber, close the lid, then press **Read standard**. When the reading is complete, remove Standard #2.

The instrument displays the results on the Read standard screen. For information on interpreting the calibration results, refer to the *Qubit® 3.0 Fluorometer User Guide*.

3.4 Press **Run samples**.

3.5 On the assay screen, select the sample volume and units:

a. Press the **+** or **–** buttons on the wheel to select the sample volume added to the assay tube (from 1–20 µL).

b. From the dropdown menu, select the units for the output sample concentration.

3.6 Insert a sample tube into the sample chamber, close the lid, then press **Read tube**. When the reading is complete (~3 seconds), remove the sample tube.

The instrument displays the results on the assay screen. The top value (in large font) is the concentration of the original sample. The bottom value is the dilution concentration. For information on interpreting the sample results, refer to the *Qubit® 3.0 Fluorometer User Guide*.

3.7 Repeat step 3.6 until all samples have been read.

Qubit® 2.0 Fluorometer

4.1 On the Home Screen of the Qubit® 2.0 Fluorometer, press **microRNA**. The "Standards Screen" will be automatically displayed.

Note: If you have already performed a calibration for the selected assay, the instrument prompts you to choose between reading new standards and running samples using the previous calibration. If you want to use the previous calibration, press **No** and skip to step 4.5. Otherwise, continue with step 4.2.

4.2 On the Standards screen, press **Yes** to read the standards.

4.3 Insert the tube containing Standard #1 into the sample chamber, close the lid, then press **Read**. When the reading is complete (~3 seconds), remove Standard #1.

4.4 Insert the tube containing Standard #2 into the sample chamber, close the lid, then press **Read**. When the reading is complete, remove Standard #2.

When the calibration is complete, the instrument displays the Sample screen.

4.5 Insert a sample tube into the sample chamber, close the lid, then press **Read**. When the reading is complete (~3 seconds), remove the sample tube.

The instrument displays the results on the Sample screen. The value displayed corresponds to the concentration after your sample was diluted into the assay tube. To find the concentration of your original sample, you can record this value and perform the calculation yourself (see "Calculate the sample concentration – Qubit® 2.0 Fluorometer", below) or the instrument can perform this calculation for you (see "Dilution Calculator – Qubit® 2.0 Fluorometer" on page 9).

4.6 Repeat step 4.5 until all samples have been read.

Calculate the sample concentration – Qubit® 2.0 Fluorometer

Note: The Qubit® 3.0 Fluorometer performs this calculation automatically.

The Qubit® 2.0 Fluorometer gives values for the Qubit® microRNA assay in ng/mL. This value corresponds to the concentration after your sample was diluted into the assay tube. To calculate the concentration of your sample, use the following equation:

$$\text{Concentration of your sample} = \text{QF value} \times \frac{200}{x}$$

where QF value is the value given by the Qubit® 2.0 Fluorometer and x is the number of microliters of sample you added to the assay tube.

This equation generates a result with the same units as the value given by the Qubit® 2.0 Fluorometer (i.e., if the Qubit® 2.0 Fluorometer gave a concentration in ng/mL, the result of the equation will be in ng/mL).

Dilution Calculator – Qubit® 2.0 Fluorometer

The "Dilution Calculator" feature of the Qubit® 2.0 Fluorometer calculates the concentration of your original sample based on the volume of sample you have added to the assay tube. To have the Qubit® 2.0 Fluorometer perform this calculation for you, follow the instructions below.

5.1 Upon completion of the sample measurement, press **Calculate Stock Conc.** The "Dilution Calculator" screen containing the volume roller wheel is displayed.

5.2 Using the volume roller wheel, select the volume of your original sample that you have added to the assay tube. When you stop scrolling, the Qubit® 2.0 Fluorometer calculates the original sample concentration based on the measured assay concentration.

3.3 To change the units in which the original sample concentration is displayed, press **ng/mL**. A pop-up window showing the current unit selection (as indicated by an adjacent red dash) opens.

3.4 Select the unit for your original sample concentration by touching the desired unit in the unit selection pop-up window. To close the unit selection pop-up window, touch anywhere on the screen outside the pop-up.

The Qubit® 2.0 Fluorometer automatically converts the units to your selection once the unit selection pop-up window is closed.

Note: The unit button next to your sample concentration reflects the change in the units (e.g., if you change the unit to pg/µL, the button will display pg/µL).

3.5 To save the data from your calculation to the Qubit® 2.0 Fluorometer, press **Save** on the Dilution Calculator screen. The last calculated value of your measurement will be saved in the .CSV file and tagged with a time and date stamp.

3.6 To exit the Dilution Calculator screen, press any navigator button on the bottom of the screen or **Read Next Sample**.

Note: When you navigate away from the Dilution Calculator screen, the Qubit® 2.0 Fluorometer saves the last values for the sample volume and the units in the Dilution Calculator screen only. Returning to the Dilution Calculator screen displays these last selected values.

Appendix

Contaminating substances

A number of common contaminants have been tested in the Qubit® microRNA assay, and most are well tolerated (Table 2, below). For untested contaminating substances, and, in general, for highest accuracy, the standards should be assayed under the same conditions as the unknowns. For example, if the experimental samples are in an unusual buffer and if 10 µL volumes of these samples are used, then add 10 µL volumes of the unusual buffer (lacking microRNA) to the tubes containing the standards.

Table 2. Effects of contaminants in the Qubit® microRNA assay

Contaminant	Final Concentration in the Assay	Concentration in 20 µL sample	Concentration in 10 µL sample	Result
Sodium chloride	5 mM	50 mM	100 mM	OK
Magnesium chloride	1 mM	10 mM	20 mM	OK
Sodium acetate	5 mM	50 mM	100 mM	OK
Ammonium acetate	1 mM	10 mM	20 mM	OK
Ethanol	1%	10%	20%	OK
Phenol	0.1%	1%	2%	OK
Chloroform	0.2%	2%	4%	OK‡
SDS	0.01%	0.1%	0.2%	NR
Triton® X-100	0.001%	0.01%	0.02%	OK
NTPs*	1:1 NTP:miRNA	1:1 NTP:miRNA	1:1 NTP:miRNA	OK
dsDNA	10:1 miRNA:dsDNA	10:1 miRNA:dsDNA	10:1 miRNA:dsDNA	OK†
ssDNA	10:1 miRNA:ssDNA	10:1 miRNA:ssDNA	10:1 miRNA:ssDNA	OK†
Oligo DNA	10:1 miRNA:Oligo	10:1 miRNA:Oligo	10:1 miRNA:Oligo	NR

Results are given either as OK, usually less than 10% perturbation, or as NR (not recommended).
* A mixture of ATP, CTP, GTP, and UTP.
† Some distortion at the high end of the assay; for best results dilute the sample so concentration is ≤ 300 ng/mL.
‡ Immiscible.

Qubit® assay kits compatible with the Qubit® Fluorometer

A number of fluorescence-based quantification kits are available for use with the Qubit® Fluorometer. Use Table 3, below, to choose a kit based on the target molecule being measured and the number of assays you require.

Table 3. Qubit® assay kits for use with the Qubit® Fluorometer

Product	Cat. no.	Number of assays*	Target	Notes
Qubit® dsDNA BR Assay Kit	Q32850	100	dsDNA	• Core range (high confidence): 0.01 µg/mL to 5 µg/mL† • Extended range (moderate confidence): 5 µg/mL to 10 µg/mL† • Useful for quantitation of genomic and miniprep DNA samples • Accurate in the presence of RNA, salts, solvents, proteins, and free nucleotides
	Q32853	500		
Qubit® dsDNA HS Assay Kit	Q32851	100	dsDNA	• Core range (high confidence): 1 ng/mL to 500 ng/mL† • Extended ranges (moderate confidence): 0.5 ng/mL to 1 ng/mL and 500 ng/mL to 600 ng/mL† • Useful for quantitation of PCR products, viral DNA, and samples for subcloning • Accurate in the presence of RNA, salts, solvents, proteins, and free nucleotides
	Q32854	500		
Qubit® ssDNA Assay Kit	Q10212	100	ssDNA	• Core range (high confidence): 5 ng/mL to 1000 ng/mL† • Extended ranges (moderate confidence): 1 ng/mL to 5 ng/mL and 1000 ng/mL to 1200 ng/mL† • Useful for quantitation of oligos, primers, denatured DNA, PCR products • Accurate in the presence of salts, urea, solvents, proteins, ATP, and agarose
Qubit® RNA HS Assay Kit	Q32852	100	RNA	• Core range (high confidence): 25 ng/mL to 500 ng/mL† • Extended ranges (moderate confidence): 20 ng/mL to 25 ng/mL and 500 ng/mL to 1000 ng/mL† • Useful for quantitation of samples for microarray, RT-PCR, and Northern blot procedures • Accurate in the presence of DNA, salts, solvents, proteins, and free nucleotides
	Q32855	500		
Qubit® RNA BR Assay Kit	Q10210	100	RNA	• Core range (high confidence): 0.1 µg/mL to 5 µg/mL† • Extended ranges (moderate confidence): 0.05 µg/mL to 0.1 µg/mL and 5 µg/mL to 6 µg/mL† • Useful for quantitation of samples for microarray, RT-PCR, and Northern blot procedures • Accurate in the presence of DNA, salts, solvents, proteins, and free nucleotides
	Q10211	500		
Qubit® microRNA Assay Kit	Q32880	100	RNA	• Core range (high confidence): 5 ng/mL to 500 ng/mL† • Extended ranges (moderate confidence): 2.5 ng/mL to 5 ng/mL and 500 ng/mL to 750 ng/mL† • Useful for quantification of samples for qRT-PCR and sequencing applications • Accurate in the presence of rRNA, large mRNA (>1000 bp), salts, solvents, proteins, and free nucleotides
	Q32881	500		
Qubit® Protein Assay Kit	Q33211	100	Protein	• Core range (high confidence): 1.25 µg/mL to 25 µg/mL† • Extended ranges (moderate confidence): 1 µg/mL to 1.25 µg/mL and 25 µg/mL to 26 µg/mL† • Little protein-to-protein difference in signal • Accurate in the presence of DTT, ß-mercaptoethanol, amino acids, and DNA • Signal is stable for 3 hours
	Q33212	500		

*Based on an assay volume of 200 µL.

†Concentration ranges refer to the concentration of sample after dilution in the assay tube.

Product List

Current prices may be obtained from our website or from our Customer Service Department.

Cat. no.	Product Name	Unit Size
Q32880	Qubit® microRNA Assay Kit, 100 assays *1–100 ng* *for use with the Qubit® Fluorometer*	1 kit
Q32881	Qubit® microRNA Assay Kit, 500 assays *1–100 ng* *for use with the Qubit® Fluorometer*	1 kit
Related products		
Q10210	Qubit® RNA BR Assay Kit, 100 assays *20–1000 ng* *for use with the Qubit® Fluorometer*	1 kit
Q10211	Qubit® RNA BR Assay Kit, 500 assays *20–1000 ng* *for use with the Qubit® Fluorometer*	1 kit
Q32852	Qubit® RNA Assay Kit, 100 assays *5–100 ng* *for use with the Qubit® Fluorometer*	1 kit
Q32855	Qubit® RNA Assay Kit, 500 assays *5–100 ng* *for use with the Qubit® Fluorometer*	1 kit
Q10212	Qubit® ssDNA Assay Kit, 100 assays *1–200 ng* *for use with the Qubit® Fluorometer*	1 kit
Q32850	Qubit® dsDNA BR Assay Kit, 100 assays *2–1000 ng* *for use with the Qubit® Fluorometer*	1 kit
Q32853	Qubit® dsDNA BR Assay Kit 500 assays *2–1000 ng* *for use with the Qubit® Fluorometer*	1 kit
Q32851	Qubit® dsDNA HS Assay Kit, 100 assays *0.2–100 ng* *for use with the Qubit® Fluorometer	1 kit
Q32854	Qubit® dsDNA HS Assay Kit, 500 assays *0.2–100 ng* *for use with the Qubit® Fluorometer*	1 kit
Q33211	Qubit® Protein Assay Kit, 100 assays *0.25–5 µg* *for use with the Qubit® Fluorometer*	1 kit
Q33212	Qubit® Protein Assay Kit, 500 assays *0.25–5 µg* *for use with the Qubit® Fluorometer*	1 kit
Q32856	Qubit® assay tubes *set of 500*	1 set

Purchaser Notification

These high-quality reagents and materials must be used by, or directly under the supervision of, a technically qualified individual experienced in handling potentially hazardous chemicals. Read the Safety Data Sheet provided for each product; other regulatory considerations may apply.

Obtaining Support
For the latest services and support information for all locations, go to **www.lifetechnologies.com**.

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- Obtain information about customer training
- Download software updates and patches

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