

Quant-iT™ Assay Kits

**Sensitive,
Selective, and
Rapid** *Quantitation of
DNA, RNA, and
Protein Samples*

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Quant-iT Assay Kits

1
One Family

4
Four Assays

0
Zero Hassle

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The Quant-iT assays represent the most advanced quantitation systems for DNA, RNA, or protein samples. Molecular Probes state-of-the-art assay reagents deliver high sensitivity and specificity together with a simple, streamlined protocol. All Quant-iT kits contain prepared buffers and prediluted standards — just dilute the dye in the provided buffer, add your sample, and read!

The Quant-iT assays are a vast improvement over UV absorbance methods for quantitation of DNA, RNA, or protein. The fluorescence-based assays are orders of magnitude more sensitive than UV absorbance readings, meaning that you use less of your sample — only 1–20 μL . The Quant-iT assays are also more accurate, because the reagents are highly selective for the target compounds and the assays are not affected by common contaminants.

The fluorescent dye in each Quant-iT kit matches common fluorescence excitation and emission filter sets in fluorescent microplate readers, making the assays ideal for high-throughput environments

or for small numbers of samples. Whatever your quantitation task, make it easy and painless with Quant-iT Assay Kits.

- **Ready to use** — no dilution of standards or buffer required
- **Easy to perform** — just add sample to diluted dye and read fluorescence
- **Highly sensitive** — orders of magnitude more sensitive than UV absorbance
- **Highly selective** — separate kits for quantitation of DNA, RNA, or protein with minimal interference from common contaminants
- **Precise** — CVs generally less than 5% for typical users

Quant-iT Assays

Four Assays Cover Your Quantitation Needs In Molecular Biology and Biochemistry

Selection Guide for the Quant-iT Assay Kits

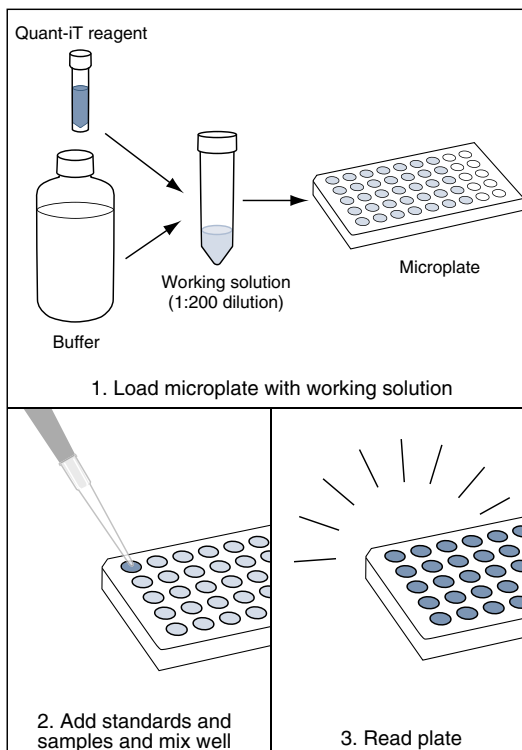
Cat #	Kit Name	Target	Useful Range*	Ex/Em†
Q33120	Quant-iT DNA Assay Kit, High Sensitivity	dsDNA	0.2–100 ng	502/523
Q33130	Quant-iT DNA Assay Kit, Broad Range	dsDNA	2–1000 ng	510/527
Q33140	Quant-iT RNA Assay Kit	RNA	5–100 ng	644/673
Q33210	Quant-iT Protein Assay Kit	Protein	0.25–5 µg	470/570

*A 1–20 µL sample volume in a 96-well microplate assay. †Approximate excitation (Ex) and fluorescence emission (Em) maxima of the Quant-iT reagents, in nm.

Each Quant-iT kit contains:

- A state-of-the-art reagent for sensitive and selective quantitation of your sample
- Prediluted standards for an accurate standard curve every time
- Ready-to-use buffer
- Easy-to-follow instructions
- Sufficient reagents to perform 1000 assays, based on the 96-well microplate format

DNA, RNA, or Protein Quantitation in Minutes

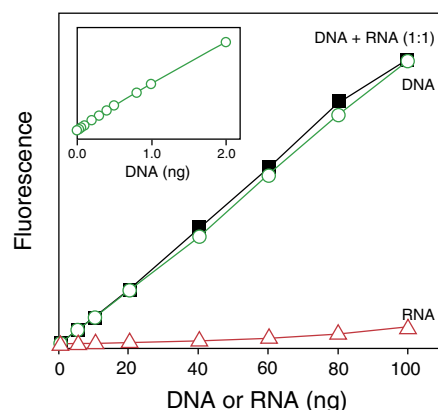


Quant-iT DNA Assay Kit, High Sensitivity

High-sensitivity DNA quantitation

(for sample concentrations from 10 pg/ μ L to 100 ng/ μ L)

- Quantitates dsDNA from 0.2 ng to 100 ng
- Accurate in the presence of an equal mass of RNA
- Signal is unaffected by many common contaminants, including free nucleotides, salts, solvents, and proteins
- Fluorescence is detected using standard fluorescein filters
- Great for quantitating PCR products, viral DNA, DNA fragments for subcloning, and other applications involving small amounts of DNA



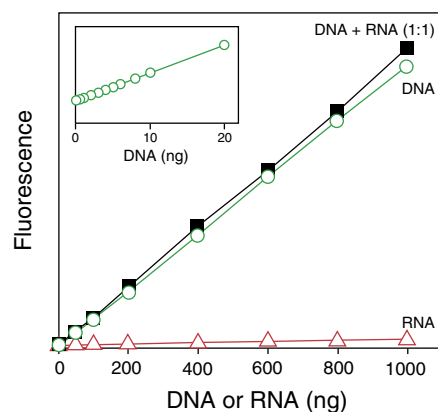
The Quant-iT High-Sensitivity DNA Assay Kit has a linear detection range of 0.2–100 ng and is selective for dsDNA, even in the presence of an equal mass of RNA. The x-axis gives the mass of nucleic acid at a given point when DNA or RNA is assayed alone. In the 1:1 mixture, the total mass of nucleic acid at a given point is double what is stated on the x-axis.

Quant-iT DNA Assay Kit, Broad Range

Fast quantitation of high-concentration DNA solutions

(for sample concentrations from 100 pg/ μ L to 1000 ng/ μ L)

- Quantitates dsDNA from 2 ng to 1000 ng
- Accurate in the presence of an equal mass of RNA
- Signal is unaffected by many common contaminants, including free nucleotides, salts, solvents, and proteins
- Fluorescence is detected using standard fluorescein filters
- Eliminates the need to dilute concentrated samples, such as genomic DNA and miniprep DNA, prior to high-throughput procedures



The Quant-iT Broad-Range DNA Assay Kit has a linear detection range of 2–1000 ng and is selective for dsDNA, even in the presence of an equal mass of RNA. The x-axis gives the mass of nucleic acid at a given point when DNA or RNA is assayed alone. In the 1:1 mixture, the total mass of nucleic acid at a given point is double what is stated on the x-axis.

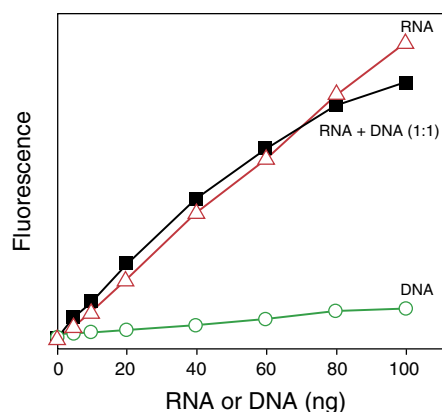
DNA-HS • DNA-BR

Quant-iT RNA Assay Kit

The first homogeneous assay ever developed for quantitation of RNA in the presence of DNA

(for sample concentrations from 250 pg/μL to 100 ng/μL)

- ▶ Quantitates RNA from 5 ng to 100 ng
- ▶ Accurate in the presence of an equal mass of DNA
- ▶ Signal is unaffected by many common contaminants, including free nucleotides, salts, solvents, and proteins
- ▶ Ideal for measuring samples for microarray, RT-PCR, and Northern blot procedures



The Quant-iT RNA Assay Kit has a linear detection range of 5–100 ng and is selective for RNA, even in the presence of an equal mass of DNA. The x-axis gives the mass of nucleic acid at a given point when DNA or RNA is assayed alone. In the 1:1 mixture, the total mass of nucleic acid at a given point is double what is stated on the x-axis.

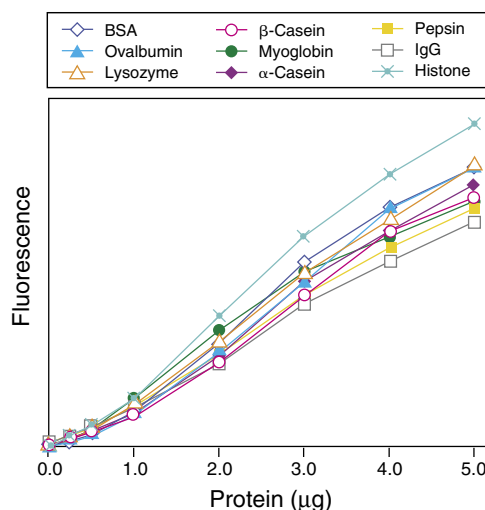
Quant-iT Protein Assay Kit

This fluorescence-based protein assay is easier and more sensitive than standard absorbance-based assays

(for sample concentrations from 12.5 μg/mL to 5 mg/mL)

- ▶ Quantitates proteins from 0.25 μg to 5 μg
- ▶ Signal is unaffected by many common contaminants*, including DTT, β-mercaptoethanol, amino acids, and DNA
- ▶ Little protein-to-protein difference in signal
- ▶ Signal is stable for 3 hours

*not compatible with detergents



The Quant-iT Protein Assay Kit has a detection range of 0.25–5 μg. This graph shows the signal generated from nine different proteins over the stated detection range. The protein-to-protein variability at the 3 μg point for all nine proteins assayed is 12%.



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