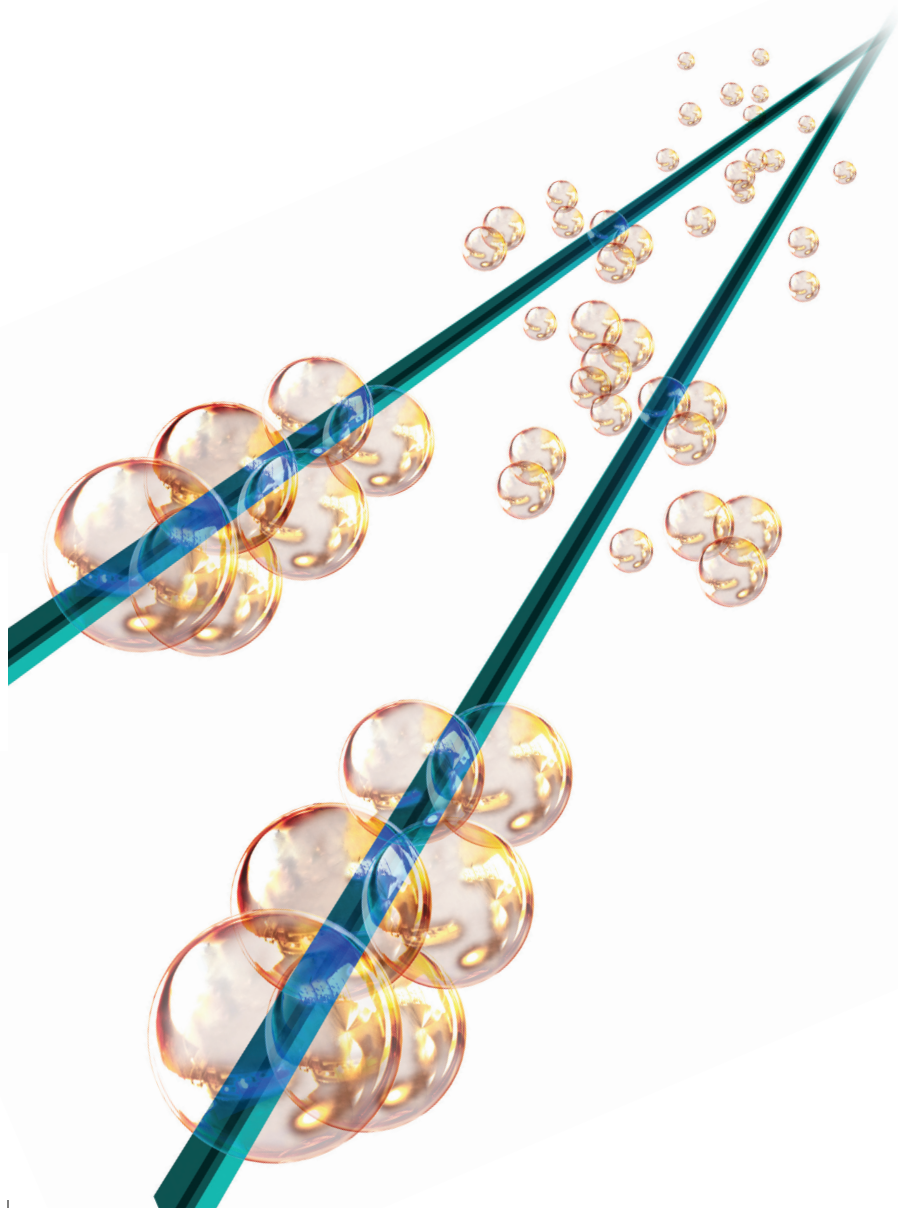




Quant-iT™ Assay Kits for microplate-based assays of DNA, RNA, and protein





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- Selective quantitation—more accurate than UV absorbance readings or Bradford assays
- High sensitivity—use as little as 1 µl of your sample
- Simple assay design—mix-and-read format for quantitation in microplates, with or without robotics
- Convenient packaging—prediluted standards and buffers for streamlined quantitation

Better technology, better results

Quant-iT™ Assay Kits (Table 1) utilize advanced fluorophores that become fluorescent upon binding to DNA, RNA, or proteins; the fluorescence intensity of the resulting complex depends directly on the amount of the target molecule in the sample. Quant-iT™ Technology gives more accurate results than can be obtained with UV absorbance readings or Bradford protein assays (Figure 1), because the Quant-iT™ Reagents only report the molecule of interest—there's no interference from free nucleotides or other contaminants. And more accurate quantitation means higher confidence for the success of downstream experiments.

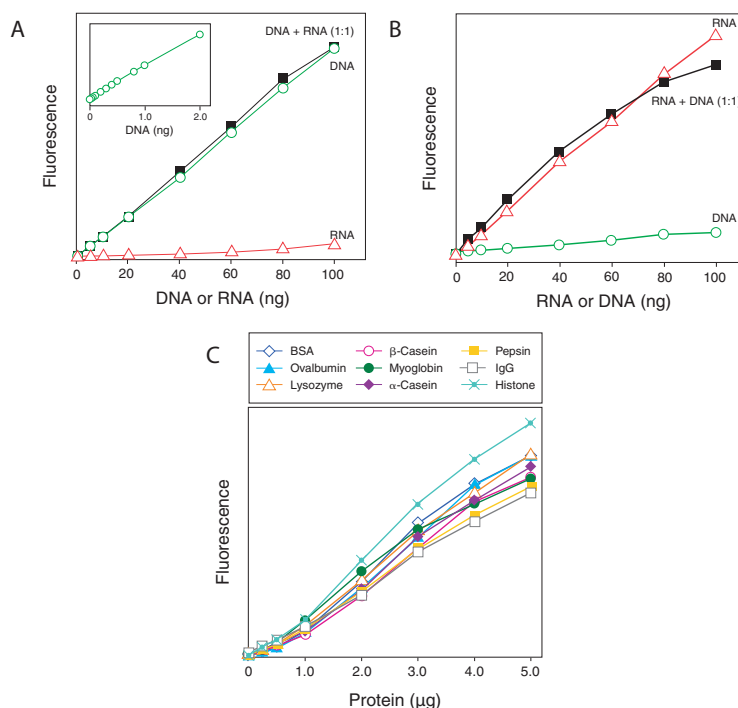


Figure 1—Quantitation using Quant-iT™ Assay Kits. **A** The Quant-iT™ dsDNA Assay Kit, High Sensitivity has a linear detection range of 0.2–100 ng and is selective for dsDNA, even in the presence of an equal mass of RNA. The x-axis gives the mass of nucleic acid when DNA or RNA is assayed alone; in the 1:1 mixture, the total mass of nucleic acid is double the amount shown. The inset shows the sensitivity of the assay for DNA. **B** 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 when DNA or RNA is assayed alone; in the 1:1 mixture, the total mass of nucleic acid is double what is stated. **C** 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%.

Save your samples

It's important to get accurate quantitation while still leaving sufficient sample for downstream applications. Quant-iT™ Reagents are up to 1,000 times more sensitive than UV absorbance readings; as little as 1 µl of your sample is all that's needed to get reliable results. The protein assay is up to 20-fold more sensitive than standard Bradford assays.

Quant-iT™ Assay Kits provide the ultimate in convenience for DNA, RNA, and protein quantitation in a simple mix-and-read microplate format (Figure 2). They are the best choice for quantitating 20–2,000 samples at a time.

These Quant-iT™ Kits provide:

- Concentrated Quant-iT™ Reagents
- Prediluted standards for generating a standard curve
- Ready-to-use 1X buffer
- Protocols for high throughput and automation-level efficiency

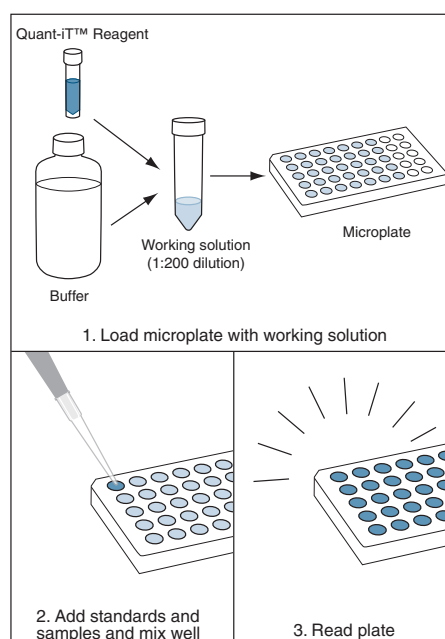


Figure 2—DNA, RNA, and protein quantitation using the Quant-iT™ Assay Kits. The Quant-iT™ Assay Kits have been specially formulated with ready-to-use buffers, prediluted standards, and easy-to-follow instructions, making quantitation both accurate and extremely easy.

Table 1—Quant-iT™ Assay Kits.

Product	Features	Concentration †	Applications
Quant-iT™ dsDNA Assay Kit, High Sensitivity, 1,000 assays *0.2–100 ng*	Selective for low-concentration dsDNA; can be used to quantitate dsDNA in the presence of free nucleotides, RNA, and protein	10 pg/μl to 100 ng/μl dsDNA	Genomic DNA Viral dsDNA PCR products Genotyping
Quant-iT™ dsDNA Assay Kit, Broad Range, 1,000 assays *2–1,000 ng*	Selective for high-concentration dsDNA; can be used to quantitate dsDNA in the presence of free nucleotides, RNA, and protein	100 ng/μl to 1 μg/μl dsDNA	Plasmid preps Subcloning fragments DNA for transfection
Quant-iT™ RNA Assay Kit, 1,000 assays *5–100 ng*	Selective for RNA; can quantitate RNA in the presence of free nucleotides, DNA, and proteins	250 pg/μl to 100 ng/μl RNA	Microarray samples Real-time PCR samples <i>In vitro</i> transcription
Quant-iT™ Protein Assay Kit, 1,000 assays *0.25–5 μg*	Selective for proteins; unaffected by DTT, β-mercapto-ethanol, amino acids, and DNA contamination	12.5 μg/ml to 5 mg/ml protein	PAGE gels Western blots Activity assays

† Sample concentration assumes a 1–20 μl sample volume in a 200 μl assay.

Ordering Information

Product	Quantity	Cat. no.
Quant-iT™ dsDNA Assay Kit, High Sensitivity	1 kit	Q33120
Quant-iT™ dsDNA Assay Kit, Broad Range	1 kit	Q33130
Quant-iT™ RNA Assay Kit	1 kit	Q33140
Quant-iT™ Protein Assay Kit	1 kit	Q33210

For more information, visit our website at probes.invitrogen.com/products/quantitation.