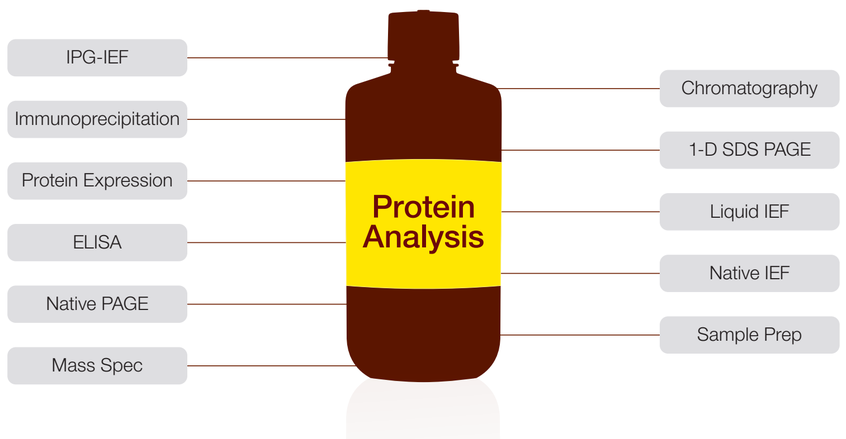
Protein Assays From Bio-Rad

Kits for total protein quantitation

www.bio-rad.com/proteinassaykits

Where to Use a Protein Assay?



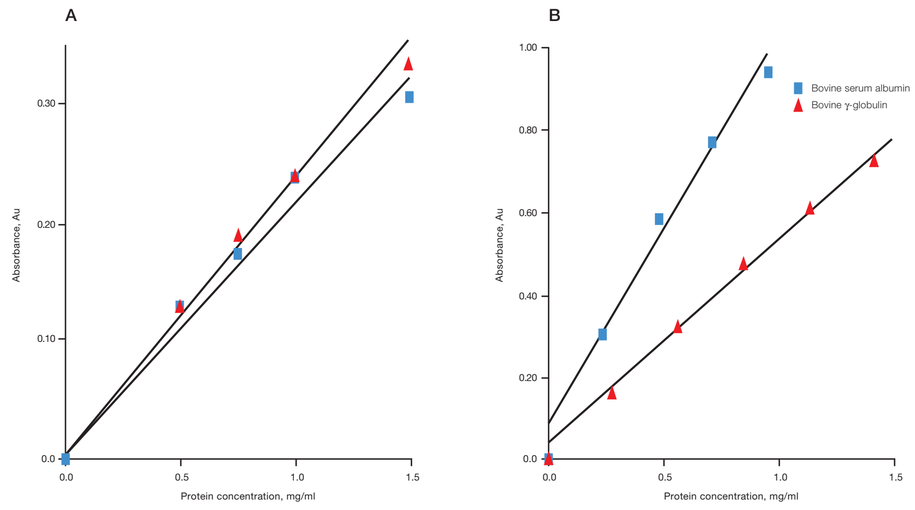
Setting Up a Standard Curve

Determine protein concentration by plotting the absorbance vs. concentration of known standards. Use the resulting curve to determine the concentration of unknown proteins based on their absorbance.

Note:
The best standard to use is a purified sample of your target protein. If this is not available, use Bio-Rad's bovine serum albumin or bovine γ-globulin to make your standard curve.

For best results

- Run a standard curve with each protein assay
- Run at least 3 replicates of all standards and samples
- Process the sample and standards the same way to ensure that differences in color intensity are due only to differences in protein concentration
- Make sure the sample and standard fall within the same concentration range

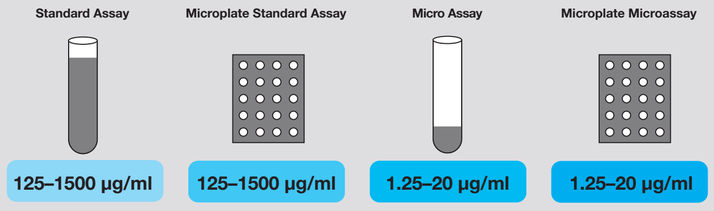


Standard curve generation using known standards. A, typical standard curve for Lowry-based assays, including *DC* protein assay and *RC DC* protein assay; B, typical standard curve for Bradford-based assays, including Bio-Rad protein assay and Quick Start Bradford protein assay.

Quick Start™ Bradford Protein Assay

Quick and easy to use, includes standards and prediluted reagent

Bradford-Based*

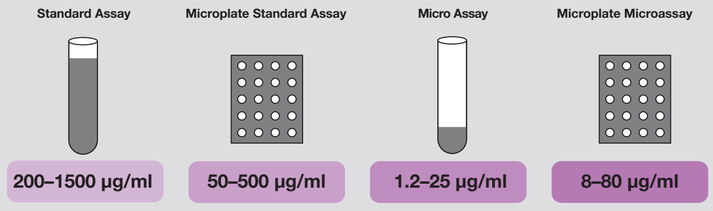


Catalog #	Description
500-0201	Quick Start Bradford Protein Assay Kit 1, includes 1 L 1x dye reagent, BSA standard (5 x 2 mg/ml)
500-0202	Quick Start Bradford Protein Assay Kit 2, includes 1 L 1x dye reagent, BSA standard set (14 x 2 ml of 0.125–2.0 mg/ml)
500-0203	Quick Start Bradford Protein Assay Kit 3, includes 1 L 1x dye reagent, bovine γ-globulin standard (5 x 2 mg/ml)
500-0204	Quick Start Bradford Protein Assay Kit 4, includes 1 L 1x dye reagent, bovine γ-globulin standard set (14 x 2 ml of 0.125–2.0 mg/ml)

Bio-Rad Protein Assay

Includes standards and reagent

Bradford-Based*

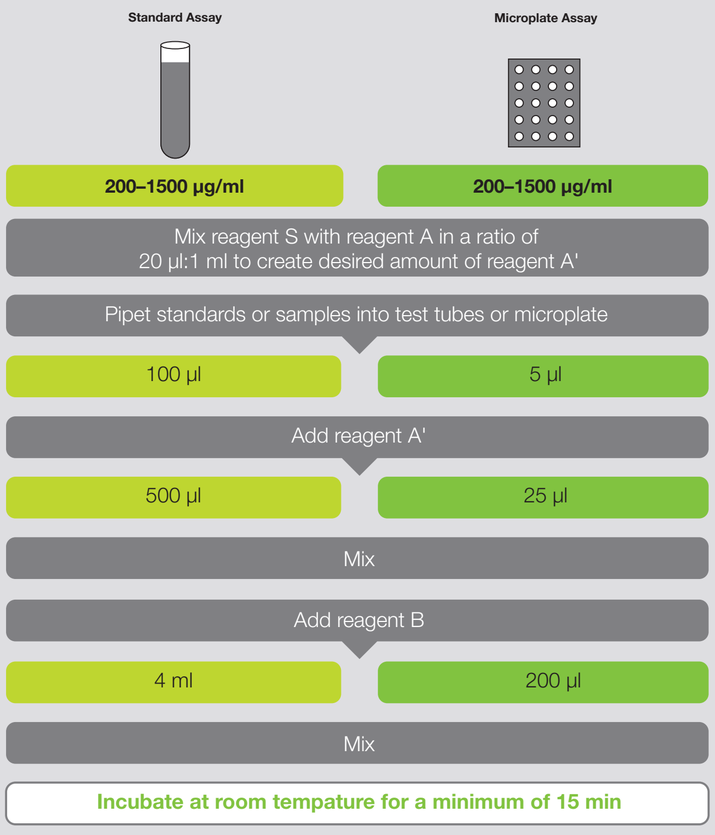


Catalog #	Description
500-0001	Bio-Rad Protein Assay Kit I, includes dye concentrate and bovine γ-globulin standard
500-0002	Bio-Rad Protein Assay Kit II, includes dye concentrate and bovine serum albumin standard

DC™ Protein Assay

Detergent compatible

Lowry-Based**

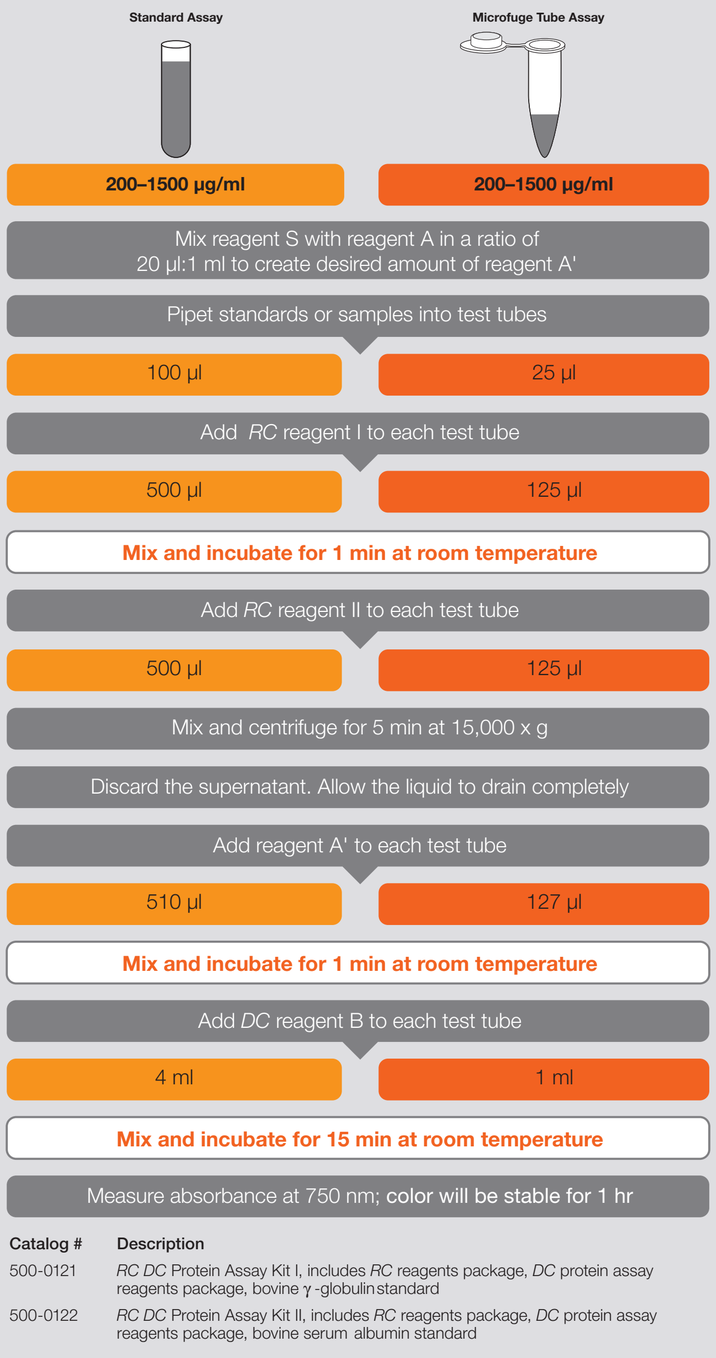


Catalog #	Description
500-0111	*DC* Protein Assay Kit I, includes *DC* protein assay reagents package and bovine γ-globulin standard
500-0112	*DC* Protein Assay Kit II, includes *DC* protein assay reagents package and bovine serum albumin standard

RC DC™ Protein Assay

Reductant and detergent compatible

Lowry-Based**



Catalog #	Description
500-0121	*RC DC* Protein Assay Kit I, includes *RC* reagents package, *DC* protein assay reagents package, bovine γ -globulin standard
500-0122	*RC DC* Protein Assay Kit II, includes *RC* reagents package, *DC* protein assay reagents package, bovine serum albumin standard

Related Products

Catalog #	Description
168-1130	iMark™ Microplate Absorbance Reader
170-2502	Standard Cuvette, 1–3.5 ml, quartz
170-2503	Semimicrovolume Cuvette, 0.5–1.4 ml, quartz
170-2504	Microvolume Cuvette, 200–700 µl, quartz
170-2505	Submicrovolume Cuvette, 80–100 µl, quartz
170-2510	trUView™ Cuvettes, pack of 50
170-2511	trUView Cuvettes, pack of 100
170-2525	SmartSpec™ Plus Spectrophotometer
223-9950	Standard Disposable Polystyrene Cuvettes, 3.5 ml, pack of 100
223-9955	Semimicrovolume Disposable Polystyrene Cuvettes, 1.5 ml, pack of 100

Reagent Compatibility

	QSBPA	BRPA	DCPA	RCDCPA
Acetate	–	0.6 M	–	–
Acetone	10%	√	–	–
Acetonitrile	10%	–	–	–
Acidic pH	–	√	–	–
Adenosine	–	0.001 M	–	–
Amino acids	–	–	√	–
Ammonium sulfate	1 M	1 M	0.5 M	–
Ampholytes pH 3–10	0.5%	0.5%	–	–
ASB-14	0.03%	–	–	–
Ascorbic acid	0.05 M	–	–	–
ATP	–	0.001 M	–	–
Barbital	–	√	–	–
BES	–	2.5 M	–	–
Bis-Tris, pH 6.5	0.2 M	–	–	–
Boric acid	–	√	–	–
Brij-35	–	–	1%	–
$C_{12}E_8$	–	–	0.2%	–
Cacodylate-Tris	–	0.1 M	–	–
Calcium chloride	0.04 M	–	0.05 M	–
CDTA	–	0.05 M	–	–
CHAPS	10%	–	1%	2%
CHAPSO	10%	–	1%	–
Citrate	–	0.05 M	–	–
Deoxycholate	–	0.1%	–	–
Deoxycholic acid	0.2%	–	–	–
Dithioerythritol (DTE)	0.01 M	–	–	–
Dithiothreitol (DTT)	0.01 M	1 M	0.001 M	0.1 M
DMSO	5%	–	–	–
DNA	–	1 mg/ml	–	–
Eagle's MEM	√	√	–	–
Earle's salt solution	√	√	–	–
EDTA	0.2 M	0.1 M	0.025 M	0.1 M
EGTA	0.2 M	0.05 M	–	–
Ethanol	10%	√	–	–
Formic acid	–	1.0 M	–	–
Fructose	–	√	–	–
Glucose	20%	√	–	–
Glutathione	–	√	–	–
Glycerol	5%	99%	–	–
Glycine	0.1 M	0.1 M	–	–
Guanidine HCl	2 M	√	0.4 M	–
Hank's salt solution	√	√	–	–
HCl	0.1 M	–	0.5 M	–
HEPES	0.1 M	0.1 M	–	–
Imidazole	0.2 M	–	–	0.5 M
Laemmli buffer	–	–	–	√
Magnesium chloride	1 M	1 M	–	–
Malic acid	–	0.2 M	–	–
2-Mercaptoethanol	1 M	1 M	X	5%
MES	0.1 M	0.7 M	–	–
Methanol	10%	√	–	–
Modified Dulbecco's PBS	√	–	–	–
MOPS	0.1 M	0.2 M	–	–
NAD	0.002 M	0.001 M	–	–
NaSCN	–	3 M	–	–
Nonidet P-40	0.25%	–	2%	–
Octyl β-glucoside	0.5%	–	1%	–
Octyl β-thioglucopyranoside	1%	–	–	–
PBS	√	–	–	–
Peptone	–	√	–	–
Phenol Red	0.5 mg/ml	–	–	–
Phenol	–	5%	–	–
Phosphate	–	1 M	–	–
PIPES	0.2 M	0.5 M	–	–
PMSF	0.002 M	–	–	–
Polyadenylic acid	–	0.001 M	–	–
Polypeptides (MW <3000)	–	√	–	–
Potassium chloride	2 M	1 M	–	–
Potassium phosphate	0.5 M	–	–	–
Pyrophosphate	–	0.2 M	–	–
rRNA	–	0.25 mg/ml	–	–
SB 3–10	0.1%		–	–
SDS	0.03%	0.1%	10%	–
Sodium acetate, pH 4.8	0.2 M	–	–	–
Sodium azide	0.5%	–	0.05%	–
Sodium bicarbonate	0.2 M	–	–	–
Sodium carbonate	0.1 M	–	–	–
Sodium chloride	2.5 M	5 M	–	–
Sodium citrate, pH 4.8 or 6.4	0.2 M	–	–	–
Sodium hydroxide	0.1 M	–	0.5 M	2.5 M
Sodium phosphate	0.5 M	√	–	–
Streptomycin sulfate	–	20%	–	–
Sucrose	10%	–	–	–
TBP	0.005 M	–	–	0.002 M
TBS	0.5x	–	–	–
TCEP	0.02 M	–	–	–
Thesit	–	–	1%	–
Thiourea	1 M	–	–	–
Thymidine	–	0.001 M	–	–
Total RNA	–	0.30 mg/ml	–	–
Tricine	0.05 M	√	–	–
Triethanolamine, pH 7.8	0.05 M	–	–	–
Tris, pH 8	1 M	2 M	0.1 M	0.5 M
Tris/glycine	1x	–	–	–
Tris/glycine/SDS	0.5x	–	–	–
Triton X-100	0.05%	0.1%	1%	2%
tRNA	–	0.4 mg/ml	–	–
Tween 20	0.01%	–	1%	2%
Tyrosine	–	0.001 M	–	–
Urea	4 M	6 M	4 M	–
Vitamins	–	√	–	–

Reagents tested for compatibility. Concentrations represent maximum concentrations for standard assay. √ = compatible; – = not tested; X = not compatible.

*Adapted from the method of Bradford. Bradford MM (1976). A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding, Anal Biochem 72, 248-254. **Adapted from the method of Lowry. Lowry OH et al. (1951). Protein measurement with the Folin phenol reagent, J Biol Chem 193, 265-275.

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