

Mini-PROTEAN[®] Electrophoresis System

Welcome to the Fast Lane



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For more than 20 years, the Mini-PROTEAN electrophoresis system has set the standard for excellence in protein electrophoresis. The Mini-PROTEAN Tetra cell and the new Mini-PROTEAN® TGX™ precast gels are the next-generation mini-format system for 1-D and 2-D vertical gel electrophoresis. Casting and running gels has never been quicker or easier.

Mini-PROTEAN Tetra Cell

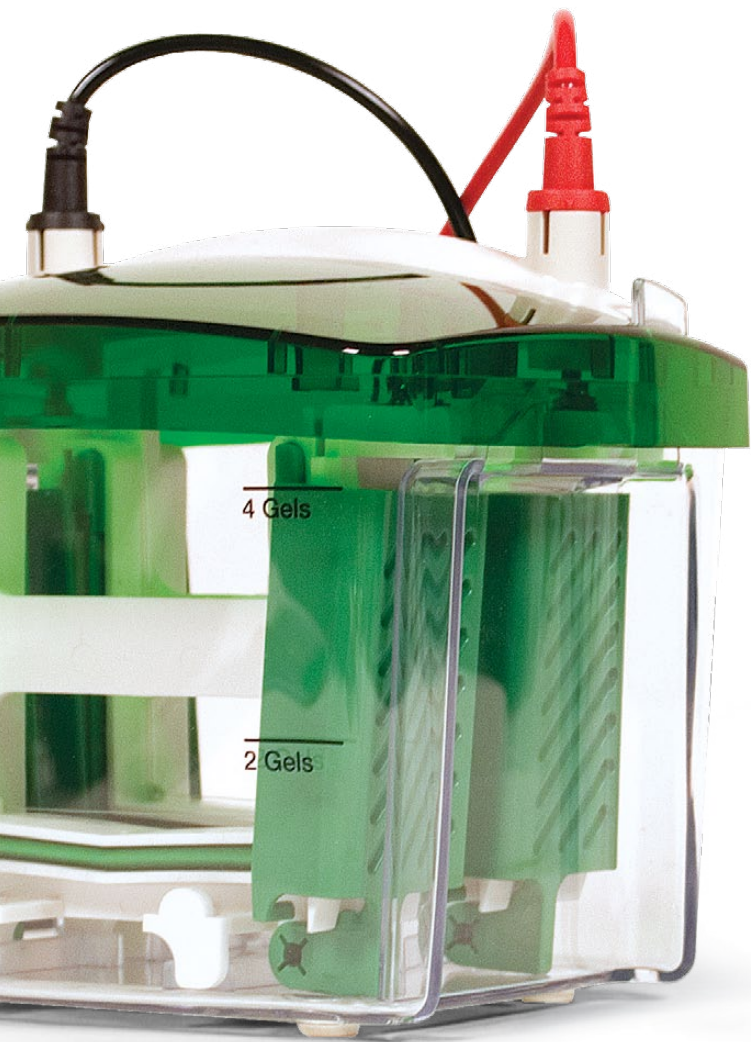
The versatile, easy-to-use Mini-PROTEAN Tetra cell is ideal for your vertical mini gel electrophoresis and blotting needs. It is easy to assemble, leakproof, robust, and accommodates up to four handcast, Mini-PROTEAN precast, or Ready Gel® precast gels. With the optional Mini Trans-Blot® module, conveniently blot gels using the same cell.

Mini-PROTEAN TGX Precast Gels

The Mini-PROTEAN TGX (Tris Glycine eXtended) long shelf life precast gels accelerate your electrophoresis without compromising performance.

- Run up to 4 Mini-PROTEAN gels in as little as 15 min
- Transfer to membranes in as little as 15 min
- Bottom-open cassette design for faster setup and less handling prior to downstream applications
- Rapidly screen new samples for discovery projects or process development and optimization projects

For more information on Bio-Rad's vertical electrophoresis cells, refer to the Life Science Research Product Catalog, or go to www.bio-rad.com/proteinElectroBlot.



Mini-PROTEAN Tetra Cell

The Mini-PROTEAN Tetra cell runs up to four mini gels in as little as 15 minutes. The Tetra cell is easy to assemble, leakproof, and reliable, providing reproducible, superior performance. Designed with flexibility in mind, the Mini-PROTEAN Tetra cell can be used with Bio-Rad handcast or precast gels and can be configured to match throughput and blotting needs. Running and blotting gels has never been easier or faster.

Modular Cells for Many Applications

Interchangeable modules easily convert a Mini-PROTEAN Tetra cell from one application to another. Each module fits into the same buffer tank and lid to form a complete cell.

- Mini-PROTEAN Tetra electrophoresis cell modules — for running precast or handcast gels for 1-D and 2-D protein separations and nucleic acid PAGE separations
- Mini Trans-Blot electrophoretic transfer cell — for transferring proteins from gels to PVDF or nitrocellulose membranes

To configure your own electrophoresis cell, order the Mini-PROTEAN Tetra cell, catalog #165-8004 (for running 1–4 gels) or #165-8005 (for running 1–2 gels).

Loading and Running Innovations

- Cell runs 1–4 gels using 1–2 running modules
- Improved core design with patented wing closures facilitates easier assembly and prevents buffer leakage
- Patented sample loading guides* allow easy sample loading and help prevent skipping or reloading lanes

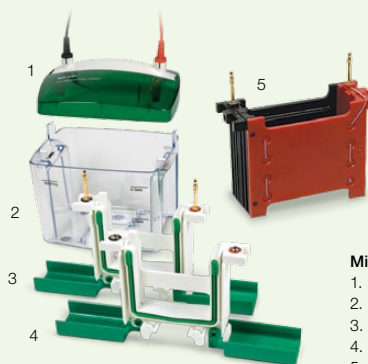
Casting Advantages

- Casting frames with simple cam closure provide precise alignment on any flat surface
- Patented side-by-side casting stand** allows access to two gels simultaneously. The spring-loaded lever creates a tight seal against the silicone gaskets to ensure leak-free casting
- Ground-glass plates with permanently bonded spacers guarantee perfect alignment and leak-free casting
- Thick glass spacer plates reduce breakage
- Glass plates and combs are labeled with thickness and number of wells for instant identification
- Innovative, patented plastic combs** have a built-in ridge to eliminate air contact during gel casting for uniform gel polymerization
- For added convenience over traditional glass plates, Mini-PROTEAN empty plastic cassettes (pre-assembled) and combs are also available

For running handcast gels, select a casting module from the ordering information. For ordering convenience, order one of the preset configurations based on the required gel thickness.

* U.S. patent 5,656,145.

** U.S. patent 6,162,342.



Mini-PROTEAN Tetra cell components:

1. Lid.
2. Tank.
3. Electrode assembly.
4. Companion running module.
5. Mini Trans-Blot module.



Reproducibility and High Throughput

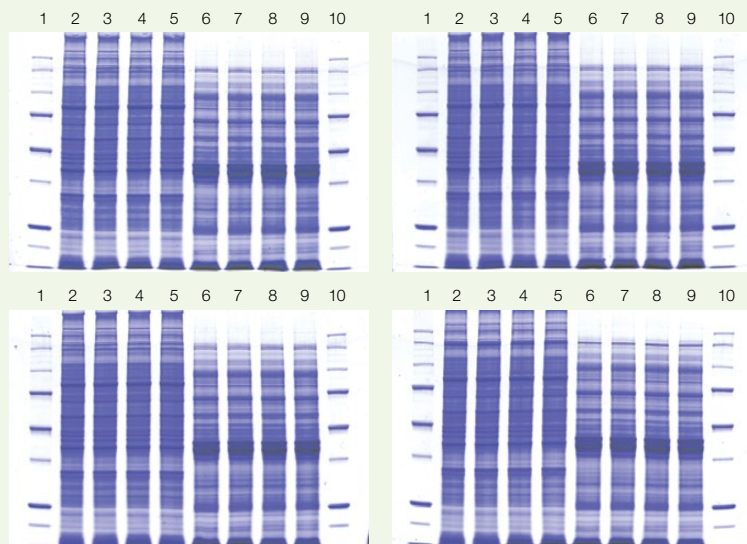


Fig. 1. High-throughput and reproducible protein separation using the Mini-PROTEAN Tetra electrophoresis system. Four Mini-PROTEAN 10% TGX precast gels were run using the Mini-PROTEAN Tetra system. Lanes 1 and 10, Precision Plus Protein™ unstained protein standards; lanes 2–5, *E. coli*; lanes 6–9 HeLa cell lysate. The gels were run at 200 V followed by staining with Bio-Safe™ Coomassie stain. Images were acquired with a GS-800™ calibrated densitometer.

Consistent Transfer

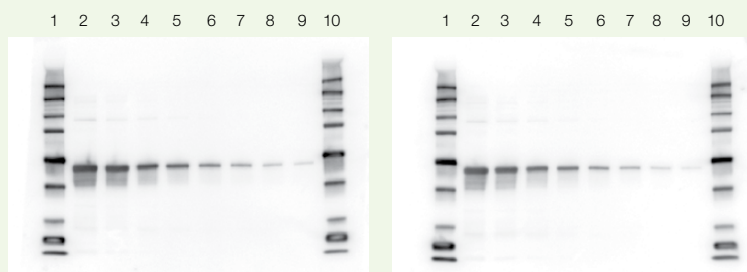


Fig. 2. Precision Plus Protein™ WesternC™ standards and dilution series of a 51 kD protein tagged with GST detected by chemiluminescent western blot. *E. coli* lysate containing an overexpressed protein tagged with GST was electrophoresed on a 4–20% Mini-PROTEAN TGX gel and blotted using the Mini-PROTEAN Tetra blotting core onto an Immun-Blot® PVDF membrane. The blot was then developed using the Immun-Star™ WesternC™ chemiluminescent kit and the image was acquired on the ChemiDoc™ XRS imaging system. Lanes 1 and 10, Precision Plus Protein WesternC standards; lanes 2–9, 51 kD protein tagged with GST 1,000, 500, 250, 125, 62.5, 31.3, 15.6, 7.8 ng, respectively.

Specifications

Mini-PROTEAN Tetra Cell

Number of gels	1–4	Typical run times for SDS-PAGE	Mini-PROTEAN TGX gels: 15–20 min (at 300 V) Ready Gel/handcast gels: 35–45 min (at 200 V)
Precast gels	Mini-PROTEAN and Ready Gel	Recommended power supply	PowerPac™ Universal
Handcast gels	Cast using Mini-PROTEAN spacer plates	Dimensions (W x L x H)	12 x 16 x 18 cm
Cassette size (W x L)	Precast: 10 x 8.3 cm	Weight	1 kg (2.2 lb)
Glass plate size (W x L)	Short plate: 10.1 x 7.3 cm Spacer plate: 10.1 x 8.2 cm	Gel sizes	8.3 x 6.4 cm (Ready Gel gels) 8.6 x 6.7 cm (Mini-PROTEAN TGX gels)
Total buffer volume for 2 gels	800 ml	Number of gels/cassette	1
Total buffer volume for 4 gels	1,000 ml	Number of cassettes/module	2

Mini Trans-Blot Module

Number of blots	1–2
Blotting area	10 x 7.5 cm
Buffer requirement	450 ml
Transfer time (at 200 mA constant current)	Mini-PROTEAN TGX gels: 15–30 min Ready Gel/handcast gels: 60 min



Mini-PROTEAN® 3 Dodeca™ Cell

The Mini-PROTEAN 3 Dodeca cell is designed for high-throughput electrophoresis. Run up to 12 Mini-PROTEAN TGX gels under identical conditions in as little as 15 minutes with high-resolution results. The Dodeca cell is easy to assemble and offers the flexibility of using precast or handcast gels. Precast gels offer the convenience and reproducibility demanded by high-throughput laboratories. If hand casting gels, eliminate gel-to-gel variation by hand casting gels 12 at a time using the Mini-PROTEAN 3 multi-casting chamber and a Model 485 gradient former.

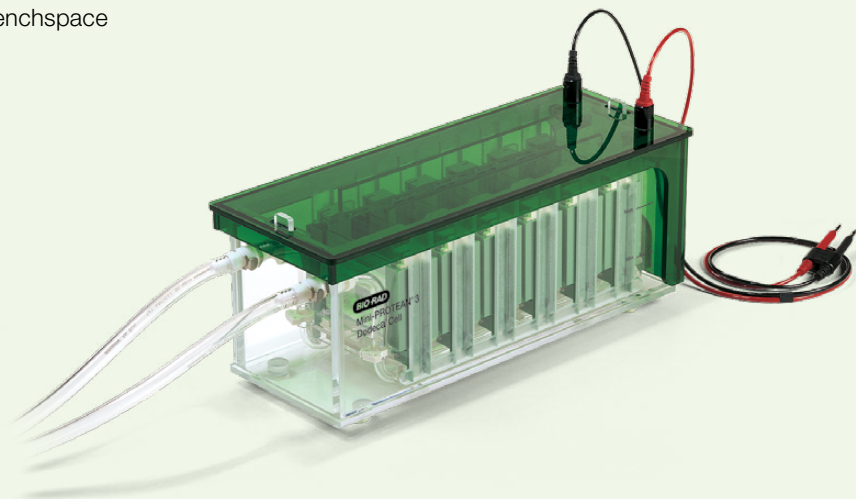
Features of the Mini-PROTEAN 3 Dodeca cell include:

- Capacity to run up to 12 gels simultaneously
- Built-in cooling coil that attaches to an external refrigerated circulator to prevent overheating and ensure highest-resolution results
- Stirbar capability that helps maintain uniform buffer tank temperatures for run reproducibility
- Easy assembly facilitated by a patented* electrophoresis clamping frame
- Convenient buffer draining via the built-in quick-connect drain port
- Compact footprint that saves benchspace

* U.S. patent 6,436,262.

Specifications

Number of gels	1–12
Precast gels	Mini-PROTEAN and Ready Gel
Handcast gels	Cast using Mini-PROTEAN 3 spacer plates and the Mini-PROTEAN 3 multi-casting chamber or Mini-PROTEAN empty plastic cassettes
Cassette size (W x L)	10 x 8.3 cm
Gel thickness	0.5, 0.75, 1.0, or 1.5 mm (precast gels and Mini-PROTEAN empty plastic cassettes are available only in 1.0 mm)
Total buffer volume	3.4–4.4 L
Typical run times	15–20 min with Mini-PROTEAN TGX gels (at 300 V), 35–45 min with Ready Gels or handcast gels (at 200 V)
Cooling	Built-in cooling coil, attaches easily to external refrigerated circulator (circulator must be purchased separately; recommended flow rate 10–15 L/min, recommended cooling capacity ≥250 W at 20°C)
Recommended power supply	PowerPac HC
Dimensions (W x L x H)	16.2 x 41.5 x 15.0 cm
Weight	5 kg (11 lb)



Mini-PROTEAN TGX Precast Gels

Introducing the New Long Shelf Life Mini-PROTEAN TGX Precast Gels

The new Mini-PROTEAN TGX (Tris-Glycine eXtended) precast gels for PAGE accelerate your electrophoresis and blotting while delivering superior performance. TGX gels maintain cooler temperatures at high voltages allowing run times and transfer times as short as 15 minutes. Optimized for standard Laemmli systems, TGX gels retain Laemmli-like separation characteristics using the standard sample and Tris/glycine running buffers. A patent-pending modification to the Laemmli system extends the shelf life to at least 12 months with exceptionally stable and reproducible results.

Get superior results with a fast and convenient Mini-PROTEAN system.

- Run times as short as 15 min
- Transfer in as little as 15 min (wet tank with Tetra cell)
- Optimized for Laemmli systems
- Traditional buffer system, low running costs
- Accurate molecular weight estimation
- 12-month shelf life
- Easy-to-open cassette designed for faster setup and less handling prior to downstream processing
- Gels contain no SDS and can be used for native PAGE applications
- Available in stain-free format, where protein sample band visualization is enabled (using stain-free enabled imagers) without staining and destaining

Mini-PROTEAN TGX gels are currently available in 7.5%, 10%, 12%, 8–16%, 4–15%, 4–20%, and a unique formulation, Any kD™, which offers separation for proteins in the 10–250 kD molecular weight range and can be used as a screening gel. Any kD gel delivers exceptional resolution for proteins in the 10–100 kD range, which are typically represented in a 2-D sample, and hence is an ideal precast gel for 2-D applications.

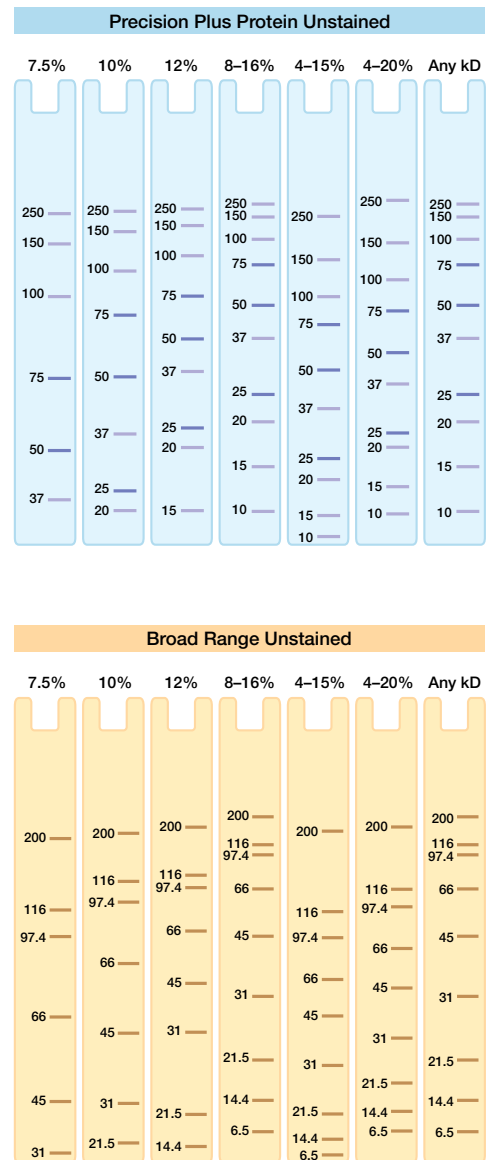


Fig. 3. Migration charts for Mini-PROTEAN TGX gels.



Consistent Performance

The Mini-PROTEAN TGX chemistry is a modified Laemmli formulation that ensures the stability of the gel matrix over 12 months. The new precast gels deliver superior protein resolution and reproducibility through the shelf life of the precast gel.

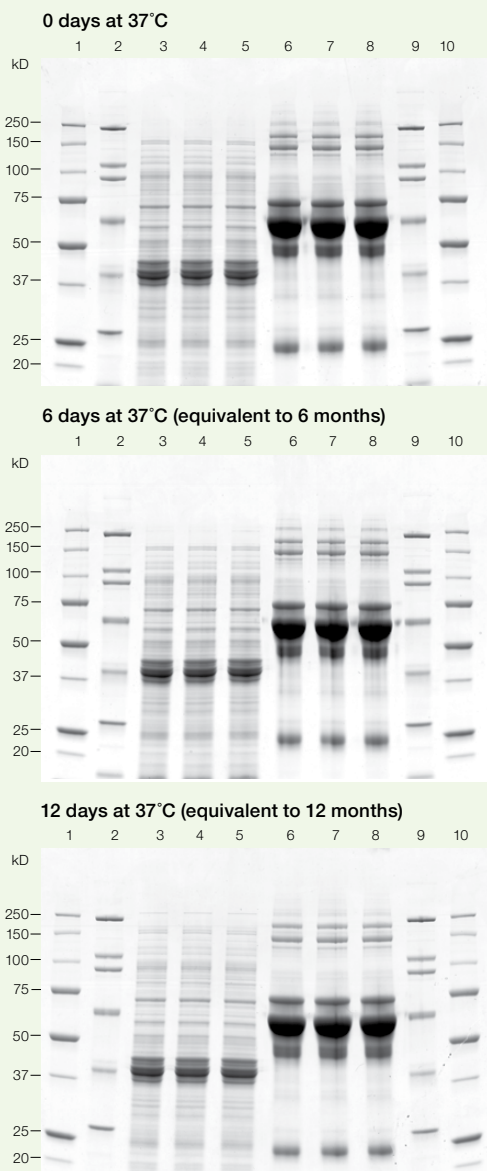


Fig. 5. Performance of Mini-PROTEAN TGX gels following prolonged storage at 37°C. One day of storage at 37°C is equivalent to one month at 4°C. Data shown is representative of 0–12 months. For further details refer to Bulletin 5910.

Robust PAGE System

The Mini-PROTEAN TGX gels have been formulated to handle a wide variety of samples and sample buffers. The gels have uniform lanes with symmetrical band shapes regardless of sample composition.

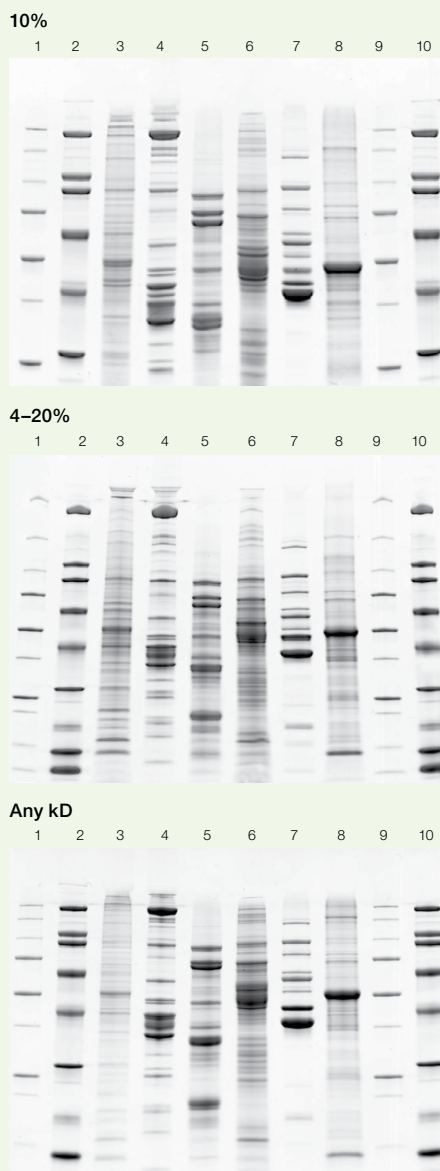


Fig. 6. Various samples run on Mini-PROTEAN TGX gels. A variety of samples were loaded in a volume of 5 μ l in the following order: lanes 1 and 9, Precision Plus Protein unstained standards; lanes 2 and 10, broad range SDS-PAGE standards; lane 3, rat midbrain extract; lane 4, salmon muscle extract; lane 5, soybean extract; lane 6, rat liver microsomes; lane 7, bacteriophage T5; lane 8, soluble spinach protein.

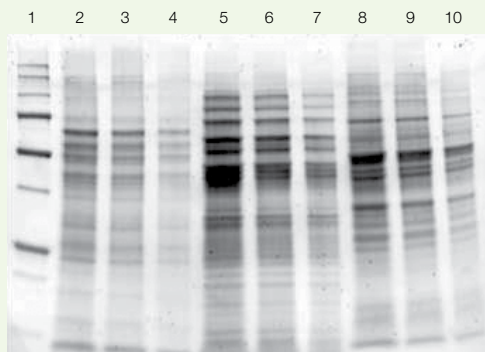


Greater Transfer Efficiency

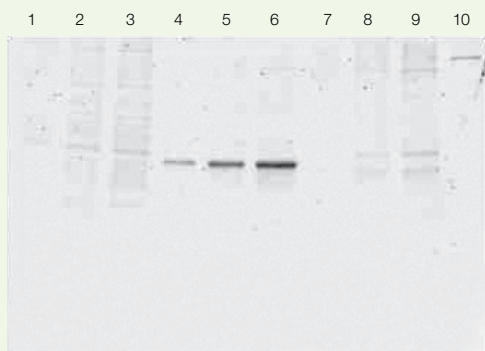
The Mini-PROTEAN TGX precast gels provide speed and excellent transfer efficiencies when blotting with standard Towbin buffers using either wet/tank or semi-dry transfer systems. The proteins from the gel can be easily transferred onto a PVDF or nitrocellulose membrane in as little as 15 minutes (wet/tank) or in as little as 3 minutes (using the Trans-Blot® Turbo™ system).

12% Mini-PROTEAN TGX Precast Gels

A. Blot stained after transfer (protein transferred to membrane)

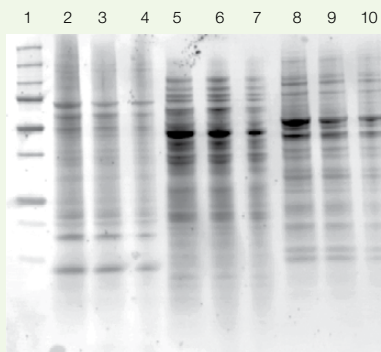


B. Gel stained after transfer (protein remaining in gel)



12% NuPAGE Bis-Tris Precast Gels (with MOPS Buffer)

A. Blot stained after transfer (protein transferred to membrane)



B. Gel stained after transfer (protein remaining in gel)



Fig. 7. High transfer efficiency of Mini-PROTEAN TGX precast gels. Mini-PROTEAN TGX or NuPAGE Bis-Tris gels were loaded as follows: lane 1, 5 μ l Precision Plus Protein unstained standards; lane 2, 15 μ g mouse liver; lane 3, 10 μ g mouse liver; lane 4, 5 μ g mouse liver; lane 5, 15 μ g *E. coli*; lane 6, 10 μ g *E. coli*; lane 7, 5 μ g *E. coli*; lane 8, 15 μ g mouse brain; lane 9, 10 μ g mouse brain; lane 10, 5 μ g mouse brain. Gels were run using Tris/glycine/SDS buffer for TGX gels or MOPS buffer for NuPAGE gels. The proteins from the gel were then transferred onto nitrocellulose membrane in a Mini-PROTEAN Tetra cell using the Mini Trans-Blot module at 150 V (constant voltage) for 15 min with pre-chilled Towbin buffer. Protein transfer was evaluated by staining the membrane with SYPRO Ruby blot stain and imaging on the PharosFX™ imager (A). Proteins remaining in the gel following transfer were visualized by staining with SYPRO Ruby gel stain and imaging with the PharosFX imager (B).

Mini-PROTEAN and Ready Gel Precast Gels

Ready Gel precast gels are designed in the traditional 8 x 10 cm mini vertical format. Proteins and nucleic acids can be separated with Ready Gel precast gels using the Mini-PROTEAN Tetra electrophoresis cell (1–4 gels) or, for high-throughput applications, the Mini-PROTEAN 3 Dodeca cell (1–12 gels). The Ready Gel precast gels are available in six buffer formulations for a variety of applications.

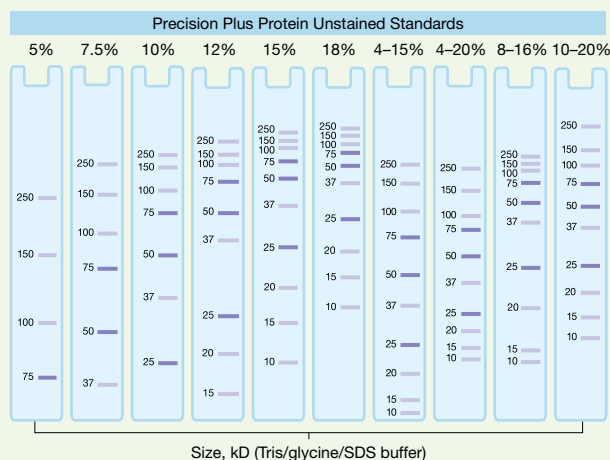
Specifications

	Ready Gel	Mini-PROTEAN
Gel dimensions (W x L x thickness)	8.6 x 6.8 x 0.1 cm	8.6 x 6.7 x 0.1 cm
Cassette dimensions (W x L x thickness)	10 x 8 x 0.4 cm	10 x 8 x 0.46 cm
Gel storage conditions	Store flat at 4°C; do not freeze	Store flat at 4°C; do not freeze
Gel shelf life*	8–12 weeks for Tris-HCl, zymogram, TBE, TBE-urea; ~26 weeks for IEF	8–12 weeks for Tris-tricine, TBE, TBE-urea

* From date of manufacture.

Mini-PROTEAN (non-TGX) precast gels are available in Tris-tricine, TBE, and TBE-urea formats. The Mini-PROTEAN gels are also compatible with the Mini-PROTEAN Tetra cell and Mini-PROTEAN 3 Dodeca cell.

Ready Gel Tris-HCl Migration Chart



Ready Gel Tris-HCl Precast Gels

Tris-HCl gels are used in SDS-PAGE for separating complex protein mixtures by size, allowing estimation of the molecular weight of sample proteins. The gels can be used to run proteins under nondenaturing conditions for subsequent analysis of their native conformation and activity by omitting SDS from the running buffer. Ready Gel Tris-HCl precast gels are made without SDS. SDS is added to the sample and running buffer to create standard SDS denaturing electrophoresis conditions.

Mini-PROTEAN Tris-Tricine Precast Gels

Tris-tricine gels are ideal for separation of peptides and small proteins with a molecular weight <10,000. Superior resolution is achieved by slowing the migration rate of the peptide-SDS complexes. This helps achieve separation from the faster-moving SDS micelles that interfere with peptide resolution in Tris-glycine buffer systems.

Ready Gel IEF Precast Gels

Isoelectric focusing (IEF) gels separate proteins based on their net charge rather than their molecular weight. IEF gels are cast with carrier ampholytes to create a pH gradient within the gel.

Mini-PROTEAN TBE Precast Gels

TBE gels are suitable for electrophoresis of nucleic acids from 50 to 2,000 base pairs; they are ideal for analysis of the purity of PCR products, standard dsDNA analysis, and RNase protection assays.

Mini-PROTEAN and Ready Gel TBE-Urea Precast Gels


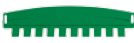

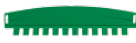
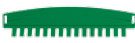

TBE-urea gels maintain denaturing conditions for analysis of single-stranded DNA and RNA. Nucleic acids between 60 and 200 bases are resolved as sharp, distinct bands.








Ready Gel Zymogram Precast Gels

Zymogram gels contain gelatin or casein, which are substrates for proteases. Samples with proteolytic activity can be visualized as clear bands against a blue background after Coomassie Brilliant Blue R-250 staining.



Ordering Information

						
Description	8+1-Well 30 µl	10-Well 30 µl	10-Well 50 µl	12-Well 20 µl	15-Well 15 µl	IPG Well 7 cm IPG Strip
Mini-PROTEAN TGX Precast Gels						
7.5% Resolving Gel	456-1029	456-1023	456-1024	456-1025	456-1026	456-1021
10% Resolving Gel	456-1039	456-1033	456-1034	456-1035	456-1036	456-1031
12% Resolving Gel	456-1049	456-1043	456-1044	456-1045	456-1046	456-1041
4–15% Resolving Gel	456-1089	456-1083	456-1084	456-1085	456-1086	456-1081
4–20% Resolving Gel	456-1099	456-1093	456-1094	456-1095	456-1096	456-1091
8–16% Resolving Gel	456-1109	456-1103	456-1104	456-1105	456-1106	456-1101
Any kD Resolving Gel	456-9039	456-9033	456-9034	456-9035	456-9036	456-9031
Mini-PROTEAN TGX Stain Free Precast Gels						
7.5% Resolving Gel	456-8029	456-8023	456-8024	456-8025	456-8026	456-8021
10% Resolving Gel	456-8039	456-8033	456-8034	456-8035	456-8036	456-8031
12% Resolving Gel	456-8049	456-8043	456-8044	456-8045	456-8046	456-8041
4–15% Resolving Gel	456-8089	456-8083	456-8084	456-8085	456-8086	456-8081
4–20% Resolving Gel	456-8099	456-8093	456-8094	456-8095	456-8096	456-8091
8–16% Resolving Gel	456-8109	456-8103	456-8104	456-8105	456-8106	456-8101
Any kD Resolving Gel	456-8129	456-8123	456-8124	456-8125	456-8126	456-8121
Mini-PROTEAN Precast Gels (2 per package)						
5% TBE	—	456-5013	456-5014*	456-5015*	456-5016	—
10% TBE	—	456-5033	456-5034*	456-5035	456-5036	—
15% TBE	—	456-5053*	456-5054	456-5055*	456-5056	—
4–20% TBE	—	456-5093*	456-5094*	456-5095*	456-5096*	—
10% TBE-Urea	—	456-6033*	—	—	456-6036*	—
15% TBE-Urea	—	456-6053*	—	456-6055*	456-6056*	—
16.5% Tris-Tricine	—	456-3063	456-3064	456-3065*	456-3066	—
10–20% Tris-Tricine	—	456-3113	456-3114	456-3115*	456-3116*	—

							
Description	10-Well 30 µl	15-Well 15 µl	Prep+1-Well 450 µl	10-Well 50 µl	12-Well 20 µl	9-Well 30 µl	IPG Well 7 cm IPG Strip
Ready Gel Tris-HCl Gels							
5% Resolving Gel	161-1210	161-1211*	—	161-1213	161-1214*	—	—
7.5% Resolving Gel	161-1100	161-1118	161-1136*	161-1154	161-1172	—	—
10% Resolving Gel	161-1101	161-1119	161-1137	161-1155	161-1173	161-1191*	161-1390*
12% Resolving Gel	161-1102	161-1120	161-1138	161-1156	161-1174	—	161-1391
15% Resolving Gel	161-1103	161-1121	161-1139*	161-1157	161-1175	—	—
18% Resolving Gel	161-1216	161-1217*	—	161-1219	161-1220*	—	—
4–15% Linear Gradient	161-1104	161-1122	161-1140	161-1158	161-1176	161-1194*	161-1392*
4–20% Linear Gradient	161-1105	161-1123	161-1141	161-1159	161-1177	—	161-1393*
8–16% Linear Gradient	161-1222	161-1223	—	161-1225	161-1226	—	161-1394
10–20% Linear Gradient	161-1106	161-1124	161-1142*	161-1160	161-1178	—	161-1395*
Ready Gel IEF Gels							
pH 3–10	161-1111	161-1129*	—	161-1165*	—	—	—
pH 5–8	161-1112*	—	—	—	—	—	—
Ready Gel Zymogram Gels							
10% Zymogram Gel with Gelatin	161-1113	161-1131*	—	161-1167	161-1185*	—	—
12% Zymogram Gel with Casein	161-1114*	—	—	161-1168*	—	—	—
Ready Gel TBE-Urea Gels							
5% TBE-Urea Gel	161-1115*	161-1133*	—	—	—	—	—

* Please allow up to 2 weeks for delivery.



Ordering Information

Catalog #	Description	Catalog #	Description
Mini-PROTEAN Tetra Cells			
165-8000	Mini-PROTEAN Tetra Cell , 10-well, 0.75 mm thickness; 4-gel system includes 5 combs, 5 sets of glass plates, 2 casting stands, 4 casting frames, sample loading guide, electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam	165-8036	Mini-PROTEAN Tetra Cell for Mini Precast Gels, Mini Trans-Blot Module, and PowerPac HC Power Supply , includes 165-8004, 170-3935, and 164-5052
165-8001	Mini-PROTEAN Tetra Cell , 10-well, 1.0 mm thickness; 4-gel system includes 5 combs, 5 sets of glass plates, 2 casting stands, 4 casting frames, sample loading guide, electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam	Mini-PROTEAN 3 Dodeca Cell	
165-8002*	Mini-PROTEAN Tetra Cell , 10-well, 0.75 mm thickness; 2-gel system includes 5 combs, 5 sets of glass plates, casting stand, 2 casting frames, sample loading guide, electrode assembly, tank, lid with power cables, mini cell buffer dam	165-4100	Mini-PROTEAN 3 Dodeca Cell , includes electrophoresis tank with built-in cooling coil, lid with power cables, 6 electrophoresis clamping frames, 2 buffer dams, drain line, 2 gel releasers
165-8003*	Mini-PROTEAN Tetra Cell , 10-well, 1.0 mm thickness; 2-gel system includes 5 combs, 5 sets of glass plates, casting stand, 2 casting frames, sample loading guide, electrode assembly, tank, lid with power cables, mini cell buffer dam	165-4101	Mini-PROTEAN 3 Dodeca Cell with Multi-Casting Chamber , same as 165-4100 with multi-casting chamber, 15 separation sheets, 8 acrylic blocks, tapered luer connector, stopcock valve
165-8004	Mini-PROTEAN Tetra Cell for Mini Precast Gels , 4-gel system includes electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam	165-5132	Mini-PROTEAN 3 Dodeca Cell and 6-Row AnyGel™ Stand , includes 165-4100 and 165-5131
165-8005	Mini-PROTEAN Tetra Cell for Mini Precast Gels , 2-gel system includes electrode assembly, clamping frame, tank, lid with power cables, mini cell buffer dam	Power Supplies	
456-0003	Mini-PROTEAN Empty Cassette , 10-well, package of 50	164-5050	PowerPac Basic Power Supply , 100–120/220–240 V
456-0005	Mini-PROTEAN Empty Cassette , 12-well, package of 50	164-5052	PowerPac HC Power Supply , 100–120/220–240 V
456-0006	Mini-PROTEAN Empty Cassette , 15-well, package of 50	164-5056	PowerPac HV Power Supply , 100–120/220–240 V
456-0001	Mini-PROTEAN Empty Cassette , IPG well, package of 50	164-5070	PowerPac Universal Power Supply , 100–120/220–240 V
456-0013**	Mini-PROTEAN Combs , 10-well combs, package of 50		
456-0015**	Mini-PROTEAN Combs , 12-well combs, package of 50		
456-0016**	Mini-PROTEAN Combs , 15-well combs, package of 50		
456-0011**	Mini-PROTEAN Combs , IPG well combs, package of 50		
			For product accessories go to bio-rad.com/miniprotean/ or see the catalog.
Mini-PROTEAN Tetra Systems		Related Literature	
165-8025	Mini-PROTEAN Tetra Cell and PowerPac Basic Power Supply , includes 165-8001 and 164-5050	1658100	Mini-PROTEAN Precast Gels Instruction Manual and Application Guide
165-8026	Mini-PROTEAN Tetra Cell and PowerPac Universal Power Supply , includes 165-8001 and 164-5070	Bulletin 5871	Mini-PROTEAN TGX Precast Gels Product Information Sheet
165-8027	Mini-PROTEAN Tetra Cell and PowerPac HC Power Supply , includes 165-8001 and 164-5052	Bulletin 5910	Mini-PROTEAN TGX Precast Gel: A Gel for SDS-PAGE with Improved Stability — Comparison with Standard Laemmli Gels Tech Note
165-8028	Mini-PROTEAN Tetra Cell and PowerPac HV Power Supply , includes 165-8001 and 164-5056	Bulletin 5911	Mini-PROTEAN TGX Precast Gel: A Versatile and Robust Laemmli-Like Precast Gel for SDS-PAGE Tech Note
165-8029	Mini-PROTEAN Tetra Cell and Mini Trans-Blot Module , includes 165-8001 and 170-3935	Bulletin 5932	Ready Gel to Mini-PROTEAN TGX Precast Gels Catalog Number Conversion Chart
165-8030	Mini-PROTEAN Tetra Cell for Mini Precast Gels and Mini Trans-Blot Module , includes 165-8004 and 170-3935	Bulletin 5933	Mini-PROTEAN TGX Precast Gels Quick Start Guide
165-8033	Mini-PROTEAN Tetra Cell, Mini Trans-Blot Module, and PowerPac Basic Power Supply , includes 165-8001, 170-3935, and 164-5050	Bulletin 6048	Mini-PROTEAN TGX Precast Gels Quick Start Guide
165-8034	Mini-PROTEAN Tetra Cell for Mini Precast Gels, Mini Trans-Blot Module, and PowerPac Basic Power Supply , includes 165-8004, 170-3935, and 164-5050	Bulletin 6062	Mini-PROTEAN Precast Gels Quick Start Guide
165-8035	Mini-PROTEAN Tetra Cell, Mini Trans-Blot Module, and PowerPac HC Power Supply , includes 165-8001, 170-3935, and 164-5052		

For product accessories go to bio-rad.com/miniprotean/ or see the catalog.

Related Literature

1658100	Mini-PROTEAN Precast Gels Instruction Manual and Application Guide
Bulletin 5871	Mini-PROTEAN TGX Precast Gels Product Information Sheet
Bulletin 5910	Mini-PROTEAN TGX Precast Gel: A Gel for SDS-PAGE with Improved Stability — Comparison with Standard Laemmli Gels Tech Note
Bulletin 5911	Mini-PROTEAN TGX Precast Gel: A Versatile and Robust Laemmli-Like Precast Gel for SDS-PAGE Tech Note
Bulletin 5932	Ready Gel to Mini-PROTEAN TGX Precast Gels Catalog Number Conversion Chart
Bulletin 5933	Mini-PROTEAN TGX Precast Gels Quick Start Guide
Bulletin 6048	Mini-PROTEAN TGX Precast Gels Quick Start Guide
Bulletin 6062	Mini-PROTEAN Precast Gels Quick Start Guide

* The 2-gel systems do not include the companion running module.

** To be used with Mini-PROTEAN empty cassettes.

For further information or to request a sample, visit www.miniprotean.com.

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