

Mini-PROTEAN[®] Electrophoresis System

Welcome to the Fast Lane



Mini-PROTEAN Electrophoresis System

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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

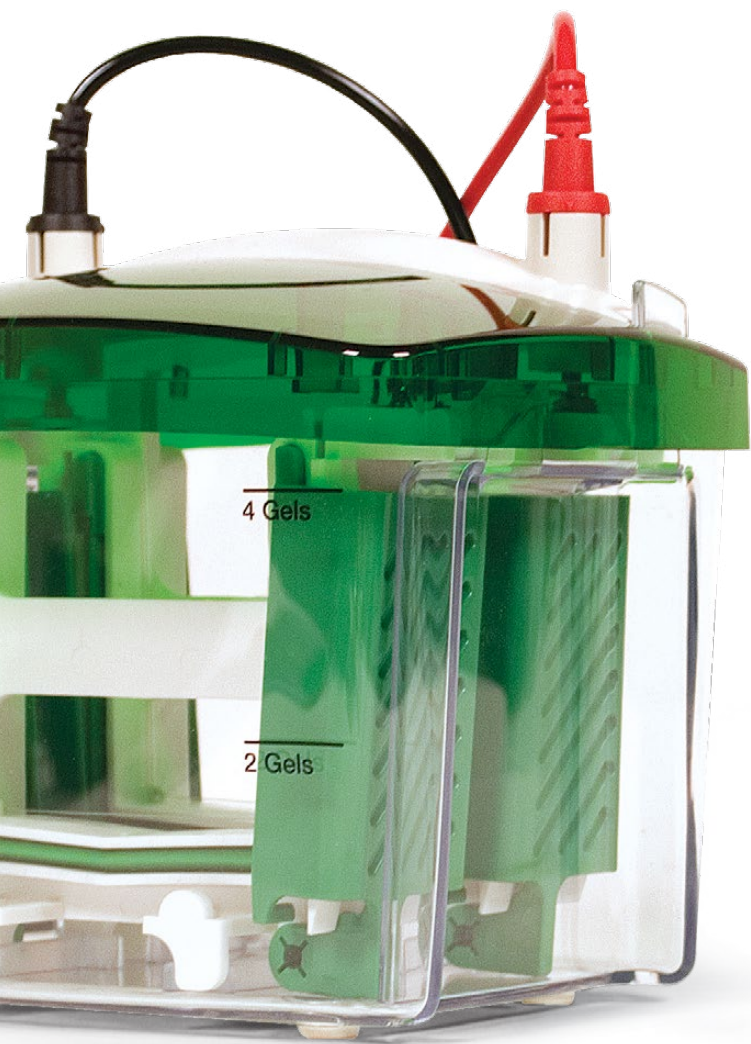
The versatile, easy-to-use Mini-PROTEAN Tetra Cell is ideal for your vertical mini gel electrophoresis and blotting needs. It is easy to assemble, leakproof, robust, and accommodates up to four handcast, Mini-PROTEAN Precast, or Ready Gel® Precast Gels. With the optional Mini Trans-Blot® Module, conveniently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

Mini-PROTEAN TGX Precast Gels

The long shelf life Mini-PROTEAN TGX (Tris Glycine eXtended) 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

Refer to the Life Science Research Product Catalog or go to bio-rad.com/ **ProteinElectroBlot** for more information on Bio-Rad's vertical electrophoresis cells.



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 #1658004 (for running 1–4 gels) or #1658005 (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

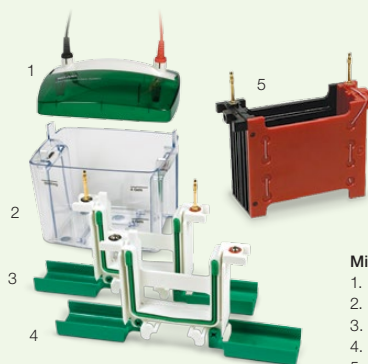
Casting Advantages

- 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.

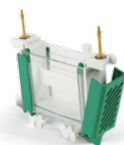
* U.S. patent 5,656,145.

** 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

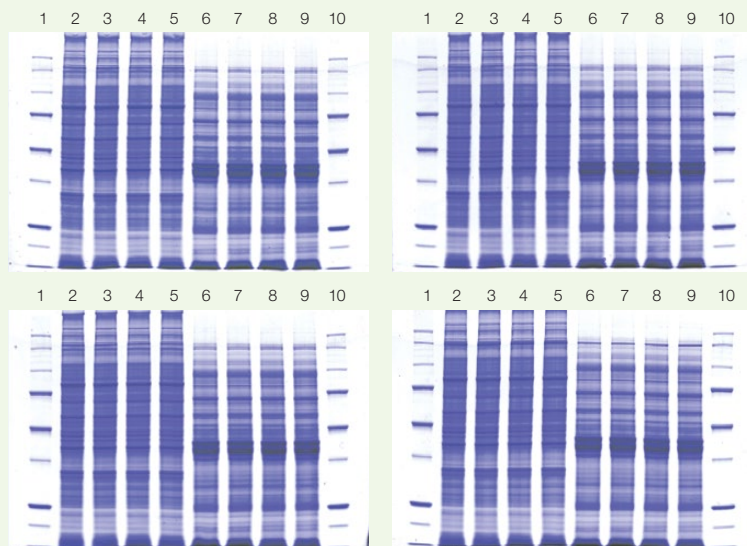


Fig. 1. High-throughput and reproducible protein separation using the Mini-PROTEAN Tetra Electrophoresis System. Four 10% Mini-PROTEAN TGX Precast Gels were run using the Mini-PROTEAN Tetra System. Lanes 1 and 10, Precision Plus Protein™ Unstained Protein Standards; lanes 2–5, *E. coli*; lanes 6–9 HeLa 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

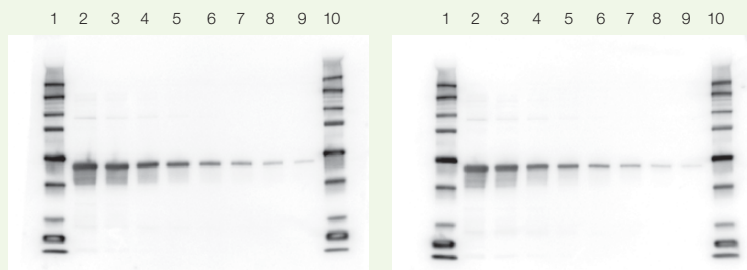


Fig. 2. Precision Plus Protein™ WesternC™ Standards and dilution series of a 51 kD protein tagged with GST detected by chemiluminescent western blot. *E. coli* lysate containing an overexpressed protein tagged with GST was electrophoresed on a 4–20% Mini-PROTEAN TGX Gel and blotted using the Mini-PROTEAN 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.

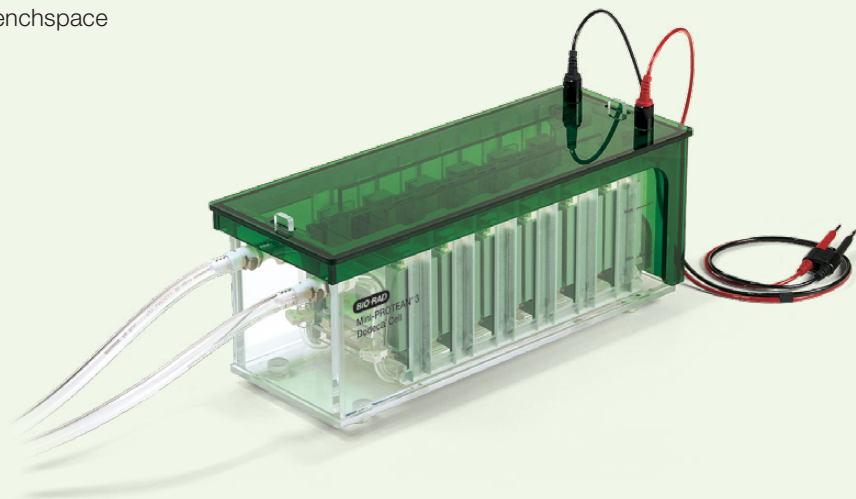
Features of the Mini-PROTEAN 3 Dodeca Cell include:

- 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 Gel 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.

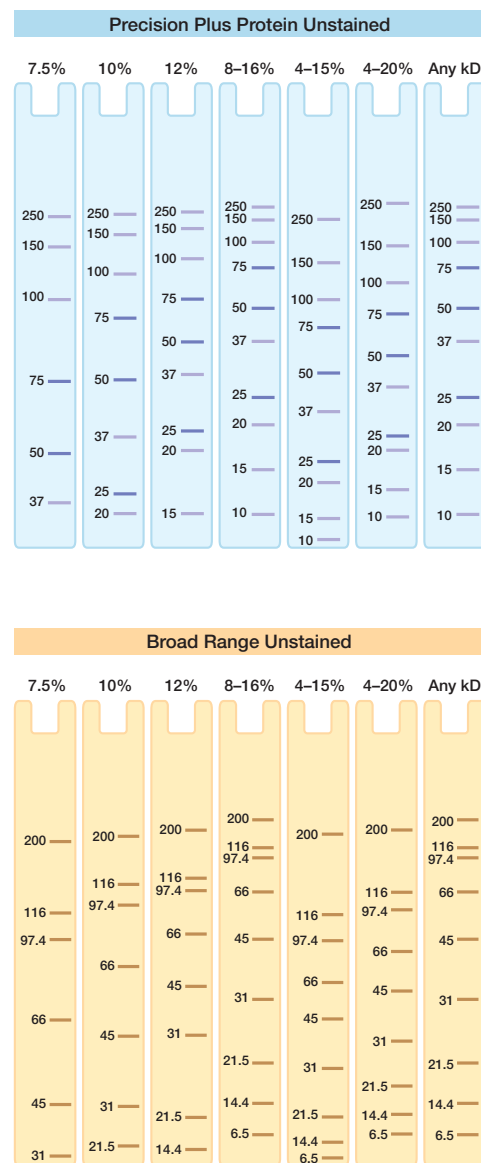


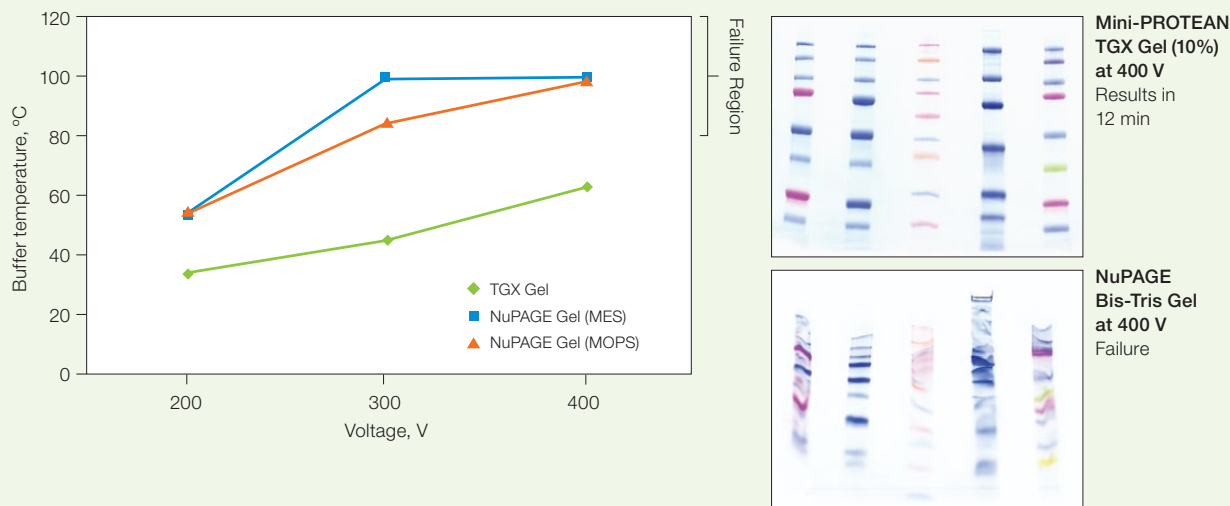
Fig. 3. Migration charts for Mini-PROTEAN TGX Gels.



Short Run Times

The Mini-PROTEAN TGX Gels maintain cooler temperatures at higher voltages while delivering high-resolution results. With the TGX Gels, run or blot your gels in as little as 15 minutes.

Mini-PROTEAN TGX Gel (10%) vs. NuPAGE Gel (10%)



Mini-PROTEAN TGX Gels Maintain Cooler Temperatures at High Voltages, Reducing Run Time and Delivering Results Faster

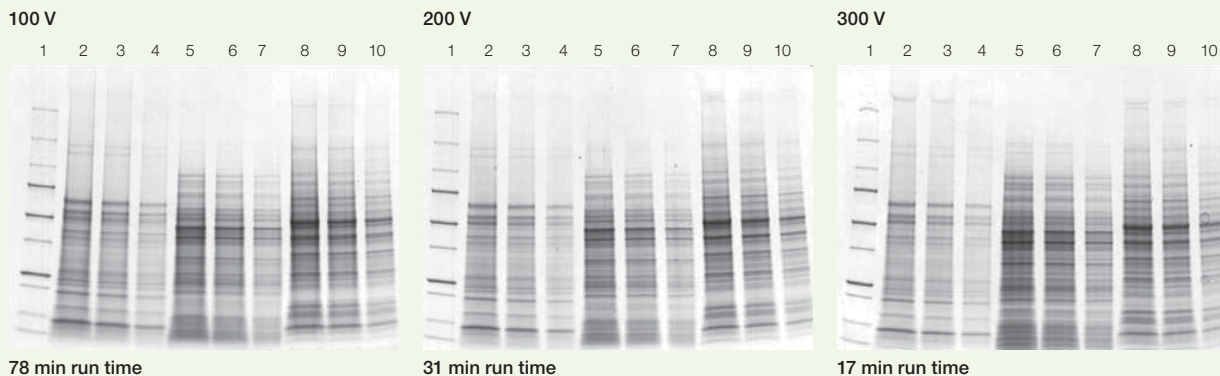


Fig. 4. 4–15% Mini-PROTEAN TGX Gels run at various voltages. Gels were loaded as follows: lane 1, Precision Plus Protein Unstained Standards; lanes 2–4, mouse liver; lanes 5–7, *E. coli*; lanes 8–10, mouse brain.

Specifications

Gel dimensions (W x L x thickness)	8.6 x 6.7 x 0.1 cm
Cassette dimensions (W x L x thickness)	10.0 x 8.0 x 0.46 cm
Cassette material	Styrene copolymer
Comb material	Polycarbonate
Gel storage conditions	Store flat at 2–8°C; do not freeze
Shelf life at 4°C*	12 months
Recommended sample buffer (Laemmli, dilute 1:1 with sample)	62.5 mM Tris-HCl, pH 6.8, 2% SDS, 20% (v/v) glycerol, 0.01% bromophenol blue
Recommended running buffer	(Tris/glycine/SDS) 25 mM Tris, 192 mM glycine, 0.1% SDS, pH 8.3

* From date of manufacture.

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.

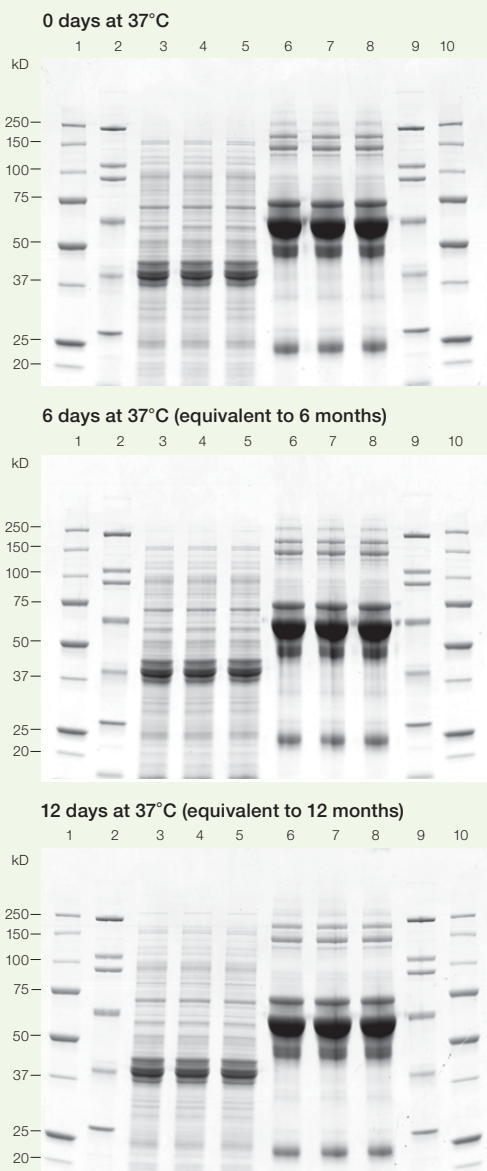


Fig. 5. Performance of Mini-PROTEAN TGX Gels following prolonged storage at 37°C. One day of storage at 37°C is equivalent to one month at 4°C. Data shown is representative of 0–12 months. For further details refer to Bulletin 5910.

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.

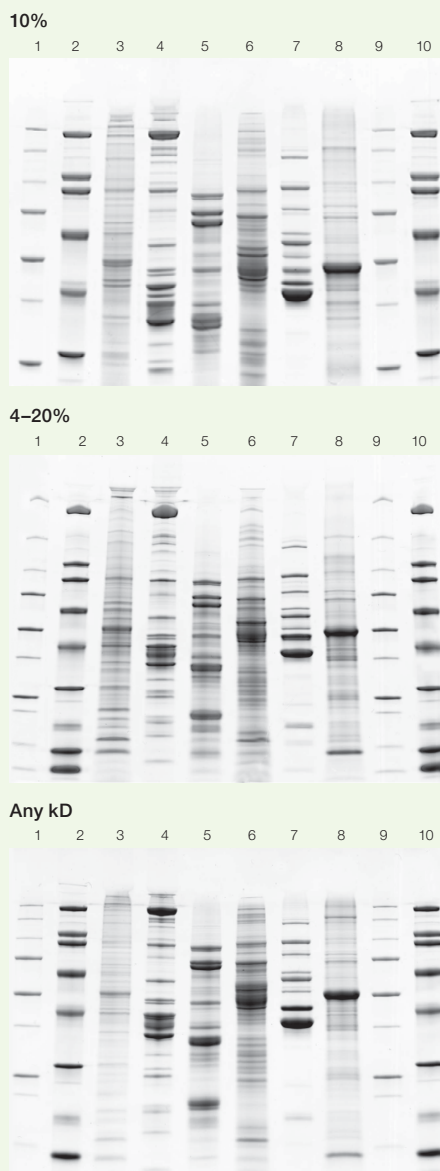


Fig. 6. Various samples run on Mini-PROTEAN TGX Gels. A variety of samples were loaded in a volume of 5 µl in the following order: lanes 1 and 9, Precision Plus Protein Unstained Standards; lanes 2 and 10, broad range SDS-PAGE standards; lane 3, rat midbrain extract; lane 4, salmon muscle extract; lane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

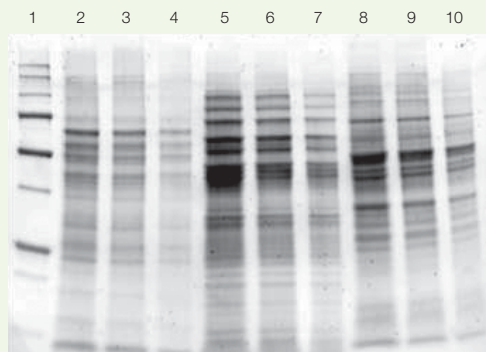


Greater Transfer Efficiency

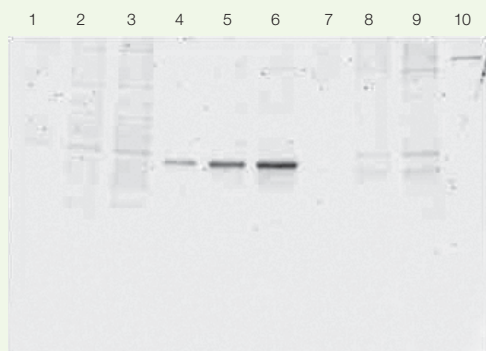
The Mini-PROTEAN TGX Precast Gels provide speed and excellent transfer efficiencies when blotting with standard Towbin buffers using either wet/tank or semi-dry transfer systems. The proteins from the gel can be easily transferred onto a PVDF or nitrocellulose membrane in as little as 15 minutes (wet/tank)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

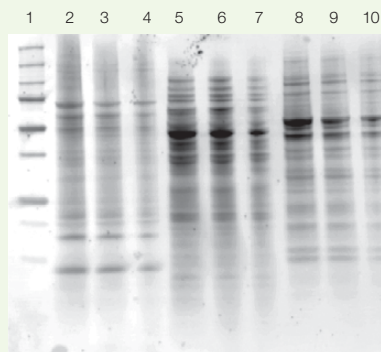


B. Gel stained after transfer (protein remaining in gel)



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 membranes 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.

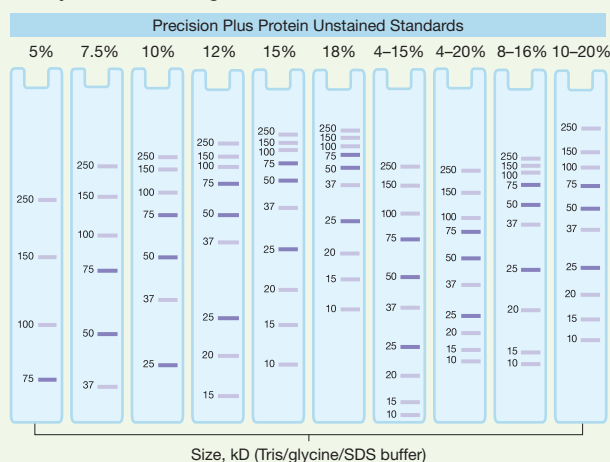
Specifications

	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



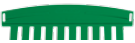



TBE-urea gels maintain denaturing conditions for analysis of single-stranded DNA and RNA. Nucleic acids between 60 and 200 bases are resolved as sharp, distinct bands.




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	4561029	4561023	4561024	4561025	4561026	4561021
10% Resolving Gel	4561039	4561033	4561034	4561035	4561036	4561031
12% Resolving Gel	4561049	4561043	4561044	4561045	4561046	4561041
4–15% Resolving Gel	4561089	4561083	4561084	4561085	4561086	4561081
4–20% Resolving Gel	4561099	4561093	4561094	4561095	4561096	4561091
8–16% Resolving Gel	4561109	4561103	4561104	4561105	4561106	4561101
Any kD Resolving Gel	4569039	4569033	4569034	4569035	4569036	4569031
Mini-PROTEAN® TGX Stain-Free™ Precast Gels						
7.5% Resolving Gel	4568029	4568023	4568024	4568025	4568026	4568021
10% Resolving Gel	4568039	4568033	4568034	4568035	4568036	4568031
12% Resolving Gel	4568049	4568043	4568044	4568045	4568046	4568041
4–15% Resolving Gel	4568089	4568083	4568084	4568085	4568086	4568081
4–20% Resolving Gel	4568099	4568093	4568094	4568095	4568096	4568091
8–16% Resolving Gel	4568109	4568103	4568104	4568105	4568106	4568101
Any kD Resolving Gel	4568129	4568123	4568124	4568125	4568126	4568121
Mini-PROTEAN Precast Gels (2 per package)						
5% TBE	—	4565013	4565014*	4565015*	4565016	—
10% TBE	—	4565033	4565034*	4565035	4565036	—
15% TBE	—	4565053*	4565054	4565055*	4565056	—
4–20% TBE	—	4565093*	4565094*	4565095*	4565096*	—
10% TBE-Urea	—	4566033*	—	—	4566036*	—
15% TBE-Urea	—	4566053*	—	4566055*	4566056*	—
16.5% Tris-Tricine	—	4563063	4563064	4563065*	4563066	—
10–20% Tris-Tricine	—	4563113	4563114	4563115*	4563116*	—

Description			
	10-Well 30 µl	15-Well 15 µl	10-Well 50 µl
Ready Gel Tris-HCl Gels			
5% Resolving Gel	—	—	1611213
7.5% Resolving Gel	—	—	1611154
10% Resolving Gel	—	—	1611155
12% Resolving Gel	—	—	1611156
15% Resolving Gel	1611103	—	1611157
18% Resolving Gel	—	—	1611219
4–15% Linear Gradient	—	1611122	1611158
4–20% Linear Gradient	1611105	1611123	1611159
8–16% Linear Gradient	—	—	—
10–20% Linear Gradient	—	1611124	1611160
Ready Gel IEF Gels			
pH 3–10	—	—	—
pH 5–8	1611112*	—	—
Ready Gel Zymogram Gels			
10% Zymogram Gel with Gelatin	—	—	1611167
12% Zymogram Gel with Casein	—	—	1611168*
Ready Gel TBE-Urea Gels			
5% TBE-Urea Gel	1611115*	—	—

* Please allow up to 2 weeks for delivery.



Ordering Information

Catalog #	Description	Catalog #	Description
Mini-PROTEAN Tetra Cells			
1658000	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	1658036	Mini-PROTEAN Tetra Cell for Mini Precast Gels, Mini Trans-Blot Module, and PowerPac HC Power Supply , includes 1658004, 1703935, and 1645052
1658001	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	
1658002*	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	1654100	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
1658003*	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	1654101	Mini-PROTEAN 3 Dodeca Cell with Multi-Casting Chamber , same as 1654100 with multi-casting chamber, 15 separation sheets, 8 acrylic blocks, tapered luer connector, stopcock valve
1658004	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	1655132	Mini-PROTEAN 3 Dodeca Cell and 6-Row AnyGel™ Stand , includes 1654100 and 1655131
1658005	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	
4560003	Mini-PROTEAN Empty Cassette , 10-well, package of 50	1645050	PowerPac Basic Power Supply , 100–120/220–240 V
4560005	Mini-PROTEAN Empty Cassette , 12-well, package of 50	1645052	PowerPac HC Power Supply , 100–120/220–240 V
4560006	Mini-PROTEAN Empty Cassette , 15-well, package of 50	1645056	PowerPac HV Power Supply , 100–120/220–240 V
4560001	Mini-PROTEAN Empty Cassette , IPG well, package of 50	1645070	PowerPac Universal Power Supply , 100–120/220–240 V
4560013**	Mini-PROTEAN Combs , 10-well combs, package of 50	For product accessories go to miniprotean.com or see the catalog.	
4560015**	Mini-PROTEAN Combs , 12-well combs, package of 50	Related Literature	
4560016**	Mini-PROTEAN Combs , 15-well combs, package of 50	1658100	Mini-PROTEAN Precast Gels Instruction Manual and Application Guide
4560011**	Mini-PROTEAN Combs , IPG well combs, package of 50	Bulletin 5871	Mini-PROTEAN TGX Precast Gels Product Information Sheet
Mini-PROTEAN Tetra Systems			
1658025	Mini-PROTEAN Tetra Cell and PowerPac Basic Power Supply , includes 1658001 and 1645050	Bulletin 5910	Mini-PROTEAN TGX Precast Gel: A Gel for SDS-PAGE with Improved Stability — Comparison with Standard Laemmli Gels Tech Note
1658026	Mini-PROTEAN Tetra Cell and PowerPac Universal Power Supply , includes 1658001 and 1645070	Bulletin 5911	Mini-PROTEAN TGX Precast Gel: A Versatile and Robust Laemmli-Like Precast Gel for SDS-PAGE Tech Note
1658027	Mini-PROTEAN Tetra Cell and PowerPac HC Power Supply , includes 1658001 and 1645052	Bulletin 5932	Ready Gel to Mini-PROTEAN TGX Precast Gels Catalog Number Conversion Chart
1658028	Mini-PROTEAN Tetra Cell and PowerPac HV Power Supply , includes 1658001 and 1645056	Bulletin 6048	Mini-PROTEAN TGX Precast Gels Quick Start Guide
1658029	Mini-PROTEAN Tetra Cell and Mini Trans-Blot Module , includes 1658001 and 1703935	Bulletin 6062	Mini-PROTEAN Precast Gels Quick Start Guide
1658030	Mini-PROTEAN Tetra Cell for Mini Precast Gels and Mini Trans-Blot Module , includes 1658004 and 1703935	* The 2-gel systems do not include the companion running module.	
1658033	Mini-PROTEAN Tetra Cell, Mini Trans-Blot Module, and PowerPac Basic Power Supply , includes 1658001, 1703935, and 1645050	** To be used with Mini-PROTEAN Empty Cassettes.	
1658034	Mini-PROTEAN Tetra Cell for Mini Precast Gels, Mini Trans-Blot Module, and PowerPac Basic Power Supply , includes 1658004, 1703935, and 1645050	Visit miniprotean.com for further information or to request a sample.	
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