

## ELECTROPHORESIS

# PROTEAN® II xi and XL Cells

- Large format vertical electrophoresis systems
- PROTEAN II xi format for 16 x 16 cm or 16 x 20 cm gels
- PROTEAN II XL format for 2-D gels with 17 cm IPG strips
- Cells accommodating 2 to 4 gels; multi-cells accommodating up to 6 gels
- Enhanced resolution over smaller formats

## PROTEAN II xi and XL Cells and Multi-Cells for Large Format Electrophoresis

### Large Format Vertical Electrophoresis

The PROTEAN II xi and PROTEAN II XL cells and multi-cells are large format vertical electrophoresis cells that offer the versatility to perform a wide variety of separations, including SDS- and native PAGE, 1-D and 2-D PAGE, preparative and gradient PAGE, and even high-resolution nucleic acid separations on agarose gels. For 1-D electrophoresis, use the PROTEAN II xi cell or xi multi-cell to run 16 x 16 cm (precast) or 16 x 20 cm (handcast) gels. For 2-D analysis, use the PROTEAN II XL cell or XL multi-cell to run 18.3 x 19.3 cm (precast) or 18.5 x 20 cm (handcast) second-dimension gels that accommodate 17 cm immobilized pH gradient (IPG) strips.

Whatever the application, large gel formats for vertical electrophoresis offer increased separation area, enable analysis of larger sample loads, and ultimately provide superior resolution over smaller gel formats.

### Easy to Assemble

- Single screw clamps minimize assembly time
- Casting seal eliminates messy grease and agarose leaks when hand casting gels

### Versatile

- Run 2 to 4 slab gels simultaneously with the PROTEAN II xi and XL cells or up to 6 gels with the multi-cells
- For second-dimension runs using 17 cm IPG strips, expand the PROTEAN II xi cell to the PROTEAN II XL format with the PROTEAN II IPG conversion kit



PROTEAN II xi 2-D Precast Gel System

- Use with handcast or PROTEAN II xi or XL Ready Gel® precast gels, both single percentage or gradient. All are available with IPG well for 2-D electrophoresis and in 15- or 20-well formats for 1-D electrophoresis. Gels are available for both the PROTEAN II xi and PROTEAN II XL formats
- Utilize accessories available for hand casting gels
- The PROTEAN II xi 2-D cell is available for running tube gels in the first dimension and slab gels in the second dimension

### Reliable

- Central cooling core maximizes resolving power and gel-to-gel reproducibility
- Buffer recirculation maintains uniform pH for better separation and reproducibility
- Raised upper electrode prevents arcing
- Safety lid prevents accidental reversal of polarity
- High-quality materials offer durability

**BIO-RAD**

## Ordering Information

Catalog #	Description
<b>PROTEAN II xi Cells* for 16 x 16 cm and 16 x 20 cm Gel Sizes</b>	
165-1801	<b>PROTEAN II xi Cell</b> , 16 cm, without spacers and combs
165-1802	<b>PROTEAN II xi Cell</b> , 16 cm, 1.5 mm spacers (4), 15-well combs (2)
165-1803	<b>PROTEAN II xi Cell</b> , 16 cm, 1.0 mm spacers (4), 15-well combs (2)
165-1804	<b>PROTEAN II xi Cell</b> , 16 cm, 0.75 mm spacers (4), 15-well combs (2)
165-1811	<b>PROTEAN II xi Cell</b> , 20 cm, without spacers and combs
165-1812	<b>PROTEAN II xi Cell</b> , 20 cm, 1.5 mm spacers (4), 15-well combs (2)
165-1813	<b>PROTEAN II xi Cell</b> , 20 cm, 1.0 mm spacers (4), 15-well combs (2)
165-1814	<b>PROTEAN II xi Cell</b> , 20 cm, 0.75 mm spacers (4), 15-well combs (2)
<b>PROTEAN II XL Cells, Wide Format, Compatible With ReadyStrip™ IPG Strips, for 18.3 x 20 cm Gel Size</b>	
165-3188	<b>PROTEAN II XL Cell, wide format</b> , 1.0 mm, includes PROTEAN II xi basic unit (165-1834) and 1.0 mm IPG conversion kit (165-3183)
165-3189	<b>PROTEAN II XL Cell, wide format</b> , 1.5 mm, includes PROTEAN II xi basic unit (165-1834) and 1.5 mm IPG conversion kit (165-3186)
165-3190	<b>PROTEAN II XL Cell, wide format</b> , 2.0 mm, includes PROTEAN II xi basic unit (165-1834) and 2.0 mm IPG conversion kit (165-3184)
<b>PROTEAN II IPG Conversion Kits for 2-D Electrophoresis (to Convert xi to XL)</b>	
165-3183	<b>PROTEAN II xi Cell IPG Conversion Kit</b> , 1.0 mm, 18.5 x 20 cm, includes 2 sets of IPG clamps, 2 sets of 20 x 20 cm glass plates, 4 IPG spacers, 2 IPG 2-D combs, 2 IPG central cooling core gaskets, 2 casting stand gaskets, alignment card
165-3186	<b>PROTEAN II xi Cell IPG Conversion Kit</b> , 1.5 mm, 18.5 x 20 cm
165-3184	<b>PROTEAN II xi Cell IPG Conversion Kit</b> , 2.0 mm, 18.5 x 20 cm
165-1834	<b>PROTEAN II xi Basic Unit With Casting Stand</b> , includes central cooling core, lower buffer chamber, lid with cables, leveling bubble; combine with an IPG conversion kit for a complete 18.5 cm wide format system
<b>PROTEAN II xi Multi-Cell</b>	
165-1951	<b>PROTEAN II xi Multi-Cell</b> , includes 3 central cooling cores with gaskets, buffer tank, lid with power cables, 1 upper buffer dam, PROTEAN II xi multi-casting chamber with accessories, leveling bubble, instructions
165-1956	<b>PROTEAN II xi Multi-Cell 2-D Conversion Kit</b> , for proper cooling, includes 2 cooling coils and manifold (required for 2-D electrophoresis applications)
<b>PROTEAN II XL Multi-Cell, Wide Format, Compatible With ReadyStrip IPG Strips</b>	
165-3176	<b>PROTEAN II XL Multi-Cell</b> , wide format, 1.0 mm
165-3177	<b>PROTEAN II XL Multi-Cell</b> , wide format, 1.5 mm
165-3178	<b>PROTEAN II XL Multi-Cell</b> , wide format, 2.0 mm

Catalog #	Description
<b>PROTEAN II xi 2-D Cells**</b>	
165-1931	<b>PROTEAN II xi 2-D Cell</b> , 1.0 mm, 16 cm
165-1932	<b>PROTEAN II xi 2-D Cell</b> , 1.5 mm, 16 cm
165-1933	<b>PROTEAN II xi 2-D Cell</b> , 1.0 mm, 20 cm
165-1934	<b>PROTEAN II xi 2-D Cell</b> , 1.5 mm, 20 cm
<b>PROTEAN II XL Ready Gel Precast Gels, IPG Well</b>	
161-1450	<b>10% Tris-HCl Gel</b> , 1.0 mm thick, 18.3 cm x 19.3 cm, IPG well
161-1451	<b>12% Tris-HCl Gel</b> , 1.0 mm thick, 18.3 cm x 19.3 cm, IPG well
161-1452	<b>10–20% Tris-HCl Gel</b> , 1.0 mm thick, 18.3 cm x 19.3 cm, IPG well
161-1453	<b>8–16% Tris-HCl Gel</b> , 1.0 mm thick, 18.3 cm x 19.3 cm, IPG well
<b>PROTEAN II xi Ready Gel Precast Gels, 15-Well</b>	
161-1454	<b>10% Tris-HCl Gel</b> , with 4% stacking gel, 1.0 mm thick, 16 x 16 cm, 15-well
161-1455	<b>12% Tris-HCl Gel</b> , with 4% stacking gel, 1.0 mm thick, 16 x 16 cm, 15-well
161-1456	<b>10–20% Tris-HCl Gel</b> , with 4% stacking gel, 1.0 mm thick, 16 x 16 cm, 15-well
161-1457	<b>8–16% Tris-HCl Gel</b> , with 4% stacking gel, 1.0 mm thick, 16 x 16 cm, 15-well
<b>PROTEAN II xi Ready Gel Precast Gels, 20-Well</b>	
161-1458	<b>10% Tris-HCl Gel</b> , with 4% stacking gel, 1.5 mm thick, 16 x 16 cm, 20-well
161-1459	<b>12% Tris-HCl Gel</b> , with 4% stacking gel, 1.5 mm thick, 16 x 16 cm, 20-well
161-1460	<b>10–20% Tris-HCl Gel</b> , with 4% stacking gel, 1.5 mm thick, 16 x 16 cm, 20-well
161-1461	<b>8–16% Tris-HCl Gel</b> , with 4% stacking gel, 1.5 mm thick, 16 x 16 cm, 20-well

\* Each PROTEAN II xi cell includes a central cooling core with gaskets, lower buffer chamber, lid with cables, 2 sets of glass plates, 4 sandwich clamps, upper buffer dam, casting stand with gaskets, leveling bubble, and instructions. The 16 cm cells include clamps for running 16 cm gels; the 20 cm cells include clamps for 20 cm gels. Cells without spacers and combs (catalog #165-1801 and #165-1811) allow you to select the spacer thickness and comb that will best fit your application.

\*\* Each PROTEAN II xi 2-D cell includes a central cooling core with gaskets, lower buffer chamber, lid with cables, 2 sets of glass plates (with beveled inner plates), 4 sandwich clamps, twenty-four 180 mm long glass tubes (tube diameter = spacer thickness), 2 tube gel adaptors, 16 grommets, 16 stoppers, two 2-D combs, 4 spacers, upper buffer dam, casting stand with gaskets, leveling bubble, and instructions. Sandwich clamps are sized to fit the gel length appropriate for the cell (16 cm or 20 cm). 1.0 mm and 1.5 mm indicate the thickness of spacers and combs included with the cell. Run both tube gels for first dimension electrophoresis and slab gels for second dimension electrophoresis in the same cell.



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