

PAGEr™ EX Gels

Instructions for Use

Introduction

This protocol covers all formats of PAGEr™ EX Gels. These fast precast protein gels **must** be used with ProSieve™ EX Running Buffer for optimal results.

Precautions

- Wear gloves and use all safety precautions when handling PAGEr™ EX Gels.
- Please read the Material Safety Data Sheet (MSDS) for this product prior to use. MSDS's are available from Lonza Scientific Support, or www.lonza.com.

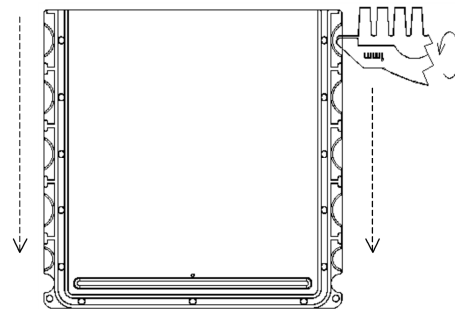
Procedure

1. Prepare a 0.67X working stock of ProSieve™ EX Running Buffer by diluting the 10X stock 15-fold with deionized water. (i.e. 67 ml 10X stock brought to 1000 ml with deionized water).
2. Cut open the pouch and remove the gel.
3. Rinse the gel cassette with distilled or deionized water.
4. Peel the tape off the bottom of the cassette.
5. Gently pull out the comb and place it aside so it can be used to separate the cassette plates at the end of the run.
6. Mount the cassette(s) into the electrophoresis apparatus so the printed side faces the outer (anode) buffer chamber. If running only one gel, mount an appropriate buffer dam. See page 2 for chamber instructions.
7. Fill the buffer chambers with appropriate amounts of 0.67X ProSieve™ EX Running Buffer. For best results fill both inner and outer (i.e top and bottom) buffer chambers so that both sides of the cassette are submerged up to the wells in the gel.
8. Rinse wells with 0.67X ProSieve™ EX Running Buffer.
9. Load samples into the wells (use printed lane markings as guides). For best results, load 1X sample buffer in wells without samples. See page 3 for well loading volumes.
10. Attach the electrophoresis apparatus to the power supply.
11. Run gels at constant 250V for 9 x 10 cm PAGEr™ EX Gels or 270 V for 10 x 10 cm PAGEr™ EX Gels.
12. When the dye front nears the bottom of the gel(s), the run is complete. Shut power off and remove gel(s).
13. Hold the cassette in one hand and use the comb to separate the plates as shown in the illustration right.

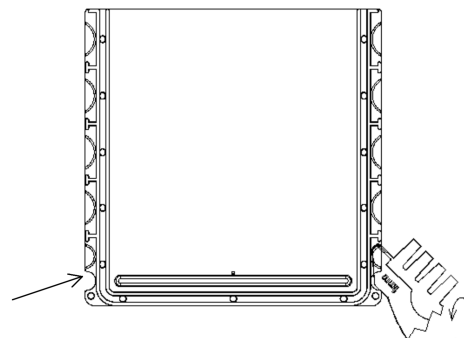
NOTE: For best results, before removing the gel from the plate, remove well area and bottom lip of gel using a sharp spatula or razor blade. Use a chopping, straight up and down motion to prevent tearing the gel.

14. The gel will adhere to either the short or long plate. Hold the plate with the gel over an open container.
If the gel is adhered to the larger plate carefully insert a gloved thumb nail or a flat edged device (such as the comb teeth) through the plate's slot and gently push out the bottom of the gel; allow the gel to peel away and gently drop into the container. *If the gel is adhered to the smaller plate*, carefully use the comb or a spatula to loosen one lower corner of the gel; allow the gel to peel away and gently drop into the container.
15. Fix, stain and destain, or blot the gel as desired

Instructions for opening PAGEr™ EX Precast Gels:



Step 1: Crack open cassette sides by inserting the comb tip into each of the notches around the cassette and twisting firmly. Starting with the notches at the top, move down each side of the cassette.



Step 2: After the sides are open, place the comb's slanted edge at a 45-degree angle between the plates at each bottom corner and twist firmly.

Step 3: Gently separate the two cassettes.

Electrophoresis Chamber Compatibility

PAGEr™ EX Gels fit a variety of chambers. Some chambers require modifications. See Chamber Modification Instructions below.

	9 x 10 cm	10 x 10 cm
PAGEr™ Minigel Chamber	X	X
Novex® XCell II™		X
XCell SureLock® Mini-Cell		X
Bio-Rad® Mini-PROTEAN® II, 3, Tetra	X	
Bio-Rad® Ready Gel® Cell	X	
Biometra® Mini V 8.10, Twin	X	
Sigma-Aldrich® Mini Techware	X†	X*
Owl Separation Systems		X
FisherBioTech® - FB-VE10-1		X
FisherBioTech® - FB-VE12-1		X
Fisher EC 120-2	X	X
EC 120 mini vertical gel system	X	X

† (10 X 8 cm unit)

*(11.3 x 10 cm unit)

Chamber Modifications for Lonza PAGEr™ EX Precast Gels.

Bio-Rad® Mini-PROTEAN® II, Mini-PROTEAN® 3, Mini-PROTEAN® Tetra Cell or Ready Gel® Cell Systems

PAGEr™ EX Gels 9 x 10 cm

Remove the rubber gasket from the inner core. Replace the gasket in the reverse orientation into the unit so the flat side faces outward.

FisherBioTech® Vertical Minigel Protein System

FB-VE10-1 mini chamber

PAGEr™ EX Gels 10 x 10 cm

Request Lonza adaptor for FisherBioTech® FB-VE10-1 (Lonza part no. 59902). The Lonza adaptor for this chamber only works if the inner gasket is white. Replace black-plastic side spacer with the Lonza adaptor. Use one on each side of the inner core. For chambers with orange gaskets, contact Lonza Scientific Support to request the appropriate spacers.

FisherBioTech® Vertical Minigel Protein System:

FB-VE12-1

PAGEr™ EX Gels 10 x 10 cm

Chamber comes with 2 sets of wedges. Use the thinner wedges for PAGEr™ EX Gels.

Novex® XCell SureLock® Mini-Cell

PAGEr™ EX Gels 10 x 10 cm

Request the Lonza spacer for the Novex® XCell SureLock® Mini-Cell chamber (Lonza part no. 59900).

Place the Lonza Spacer between gel and buffer core. With spacer in place, run one or two PAGEr™ EX Gels in the SureLock® chamber.

Owl Scientific Penguin™ Model P8DS-1

PAGEr™ EX Gels 10 x 10 cm

Request Lonza adaptor for Owl Scientific Penguin™ chamber.

The Lonza adaptor for the Penguin™ chamber only works if the inner gasket is white. Replace black-plastic side spacer with Lonza adaptor. Use one on each side of the inner core. For Owl chambers with orange gaskets, contact Lonza Scientific Support to request the appropriate spacers.

Western Blotting Recommendations

PAGEr™ EX Gels are compatible with standard blotting methods and have been optimized using semi-dry blotting systems and nitrocellulose membranes. Using **ProSieve™ EX Transfer Buffer** will speed the transfer process.

Ensure even contact between all layers of the blotting-stack system.

- Use a spatula or razor blade to remove the well area and bottom lip of the gel. Use a chopping, straight up and down motion to prevent tearing the gel.
- Gently roll out any air bubbles between each layer with a **wet** glass rod or pipette.
- Use enough transfer solution to wet the filter paper thoroughly, without over saturation. Blotting times will vary depending on the experimental conditions, apparatus, buffer, protein, etc.
- PAGEr™ EX Gels can be used with nitrocellulose (supported and unsupported) and PVDF membranes in both tank and semi-dry blot systems.
- Center the gel on the nitrocellulose or PVDF membrane. Occasionally, the gel will overlap the membrane and stick to the filter paper below. If this occurs, gently break the seal with scalpel.

Storage Conditions

PAGEr™ EX Gels should be stored at 2°C-8°C.

Do not freeze. Package contains gel buffer (0.02% sodium azide added as preservative).

Specifications

Cassette Size (L x W)	Cassette Thickness	Gel Size (L x W)	Gel Thickness
9 x 10 cm	0.49 cm	7.1 x 8.3 cm	1 mm
10 x 10 cm	0.55 cm	8.1 x 8.3 cm	1 mm

Gel Matrix: polyacrylamide

Stacking Gel: 4% stacking gel

Well Loading **Number of Wells** **Well Volume**

Volumes	12	≤20 µl
	16	≤14µl

Storage/Shelf Life: 12 months at +4°C

Optimal Separation Ranges in PAGEr™ EX Gels

- PAGEr™ EX Gels, Mid/High-range 10-350 kDa
- PAGEr™ EX Gels, Low/Mid-range 5-225 kDa

Buffer Types and Characteristics

PAGEr™ EX Gels should be used with ProSieve™ EX Running Buffer. PAGEr™ EX Gels are compatible with most commonly used sample buffers.

Ordering Information

PAGEr™ EX Gels are available in single and gradient gel concentrations & well configurations.

Cat. No.	Description	Wells	Size
58722	PAGEr™ EX Gels Mid/High range 10-350 kDa	12	9x10 cm
58724	PAGEr™ EX Gels Mid/High range 10-350 kDa	16	9x10 cm
58702	PAGEr™ EX Gels Low/Mid range 5-225 kDa	12	9x10 cm
58714	PAGEr™ EX Gels Low/Mid range 5-225 kDa	16	9x10 cm
59722	PAGEr™ EX Gels Mid/High range 10-350 kDa	12	10x10 cm
59724	PAGEr™ EX Gels Mid/High range 10-350 kDa	16	10x10 cm
59702	PAGEr™ EX Gels Low/Mid range 5-225 kDa	12	10x10 cm
59714	PAGEr™ EX Gels Low/Mid range 5-225 kDa	16	10x10 cm

For more information contact Scientific Support or visit www.lonza.com.

Related Products for Protein Separation

ProSieve™ Color Protein Markers
ProSieve™ Protein Markers
ProSieve™ EX Running Buffer
ProSieve™ EX Transfer Buffer
ProSieve™ EX Safe Stain
ProSieve™ EX Stain Enhancer
PAGEr™ Minigel Chamber

For Research Use Only

Buffer Technology licensed from DGel Electrosystem, patents pending.

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