NativePAGE™ Bis-Tris Gels

Package Contents

Product	Quantity
3–12% Bis-Tris Gels	Box of 10 gels
4–16% Bis-Tris Gels	Box of 10 gels

Storage Conditions

- Store at 2–8°C for a 1-year shelf life.
- Do not freeze.

Required Materials

- Protein sample and standard
- NativePAGE™ Running Buffer Kit
- NativePAGE™ Sample Prep Kit
- Novex® Power Supply Adapters (Cat. no. ZA10001) if not using a Life Technologies™ power supply
- XCell *SureLock*® Mini-Cell gel running tank

Timing

Run Time: 90–115 minutes for the 3–12% gel
105–120 minutes for the 4–16% gel
Voltage: 150 V constant

Selection Guide

Specialized Protein Gels
Go online to view related products.

Product Description

NativePAGE® Bis-Tris Gels provide resolution for a wide range of proteins (15–10,000 kDa) under non-denaturing conditions.

NativePAGE® Bis-Tris Gels are available in the following variations:

- **Polyacrylamide percentages**: 3–12% and 4–16%
- **Well formats**: 10 and 15 wells
- **Thickness**: 1.0 mm

Important Guidelines

- This system is designed for use in the XCell *SureLock*® Mini-Cell gel running tank.
- Load samples into sample wells filled with 1X NativePAGE™ Dark Blue Cathode Buffer prior to filling the cathode chamber to better visualize the sample wells.
- For western blotting or two-dimensional (2D) electrophoresis applications, replace the Dark Blue Cathode Buffer with Light Blue Cathode Buffer during electrophoresis to improve protein transfer.
- Do not use SDS-PAGE samples for native gel electrophoresis.

Online Resources

Visit our product page for additional information and protocols. For support, visit www.lifetechnologies.com/support.

For Research Use Only. Not for use in diagnostic procedures.

novex® by life technologies™

Print Options

Protocol Outline

A. Prepare samples, buffers, and gels.
B. Assemble the gel apparatus.
C. Load buffer, samples, and standards.
D. Perform electrophoresis.

Electrophoresis Protocol

See page page 2 to view a procedure for preparing and running your electrophoresis experiment.

Choosing the Right Gel Type for Your Application

Review the table in the pop-up to determine the best gel type for your experiment.

Choosing the Right Gel Percentage and Buffer

Refer to the migration charts in the pop-up to find the gel best suited for your application. As a general rule, your proteins of interest should migrate through ~70% of the length of the gel for the best resolution. When protein molecular weights are wide ranging or unknown, gradient gels are usually the best choice.

Choosing a Well Format and Gel Thickness

We offer NativePAGE® polyacrylamide gels in a choice of two well formats (10 or 15 wells) and one thickness (1.0 mm). When loading large samples, a gel with fewer wells is more appropriate.

Choosing a Protein Standard for your Application

Choose a Life Technologies™ standard based on your experiment:

Unstained: NativeMark™ Unstained Protein Standard
Western: NativeMark™ Unstained Protein Standard

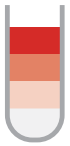
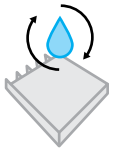
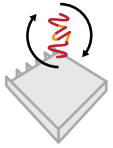
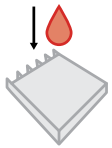
For all other specialty standards, please view further information here.

Limited Product Warranty and Disclaimer Details

life technologies™

NativePAGE™ Bis-Tris Mini Gel Electrophoresis Protocol

Follow the procedure below to prepare for and perform native gel electrophoresis using NativePAGE™ Bis-Tris Mini Gels.

Timeline	Steps	Procedure Details
1 	**Prepare samples**	See table below
2 	**Prepare buffers**	**1X NativePAGE™ Anode Buffer:** Add 50 mL of 20X NativePAGE™ Running Buffer to 950 mL of deionized water. **1X NativePAGE™ Dark Blue Cathode Buffer:** Add 50 mL 20X NativePAGE™ Running Buffer and 50 mL 20X NativePAGE™ Cathode Additive to 900 mL deionized water. **1X NativePAGE™ Light Blue Cathode Buffer:** Add 50 mL 20X NativePAGE™ Running Buffer and 5 mL 20X NativePAGE™ Cathode Additive to 945 mL deionized water.
3 	**Prepare gels**	a. Remove the comb, and rinse the gel wells three times with 1X NativePAGE™ Dark Blue Cathode Buffer. b. Remove the white tape near the bottom of the gel cassettes. c. Place the gels in the XCell *SureLock*® Mini-Cell gel running tank. d. Fill the gel wells with 1X NativePAGE™ Dark Blue Cathode Buffer.
4 	**Load samples and standards**	Load samples into sample wells filled with 1X NativePAGE™ Dark Blue Cathode Buffer prior to filling the cathode chamber to better visualize the sample wells. Load an appropriate volume and protein mass of samples on the gel. Then, load your standards.
5 	**Load buffers**	Fill the Upper Cathode Buffer Chamber with 200 mL 1X NativePAGE™ Dark Blue Cathode Buffer, and fill the Lower Anode Buffer Chamber with 550 mL NativePAGE™ Anode Buffer.
6 	**Run**	**Note:** If you are not using a Life Technologies™ power supply, install the Novex® Power Supply Adapters (Catalog number ZA10001). For western blotting or 2D electrophoresis applications, replace the Dark Blue Cathode Buffer with Light Blue Cathode Buffer after the dye front has migrated about one third of the way through the gel. When using the 3–12% gel, run for 90–115 minutes at 150 V constant. When using the 4–16% gel, run for 105–120 minutes at 150 V constant.

Procedure Details

Components	Sample with Detergent	Detergent-free Sample
Sample	x µL	x µL
NativePAGE® Sample Buffer (4X)	2.5 µL	2.5 µL
NativePAGE® 5% G-250 Sample Additive	0.25–1 µL*	optional
Deionized Water	to 10 µL	to 10 µL**

* Ensure that the final G-250 concentration is ¼th the detergent concentration.
** For additional sample preparation methods, follow instructions in the NativePAGE™ Sample Prep Kit.
Do not heat samples for native gel electrophoresis.
Prepare 1X Sample Buffer for dilutions of samples, if needed.