NuPAGE® Bis-Tris Midi Gels

Package Contents

Product	Quantity
8% Bis-Tris Gels	Box of 10 gels*
10% Bis-Tris Gels	Box of 10 gels*
4–12% Bis-Tris Gels	Box of 10 gels*

*Available with or without 10 Midi Gel Adapters.

Storage Conditions

- Store at 4–25°C for a 12-month shelf life.
- Do not freeze.

Required Materials

- Protein sample and standard
- NuPAGE® MES or MOPS SDS Running Buffer (20X)
- NuPAGE® LDS Sample Buffer (4X)
- NuPAGE® Sample Reducing Agent (10X)
- NuPAGE® Antioxidant
- Novex® Power Supply Adapters (Cat. no. ZA10001) if not using a Life Technologies™ power supply
- XCell4 *SureLock*™ Midi-Cell gel running tank or Criterion™ Cell (from Bio-Rad) with Midi Gel Adapters

Timing

Run Time: 40 minutes with MES Buffer in the XCell4™
35 minutes with MES Buffer in the Criterion™ Cell
55 minutes with MOPS Buffer in the XCell4™
40 minutes with MOPS Buffer in the Criterion™ Cell

Voltage: 200 V constant

Selection Guide

Protein Gels
Go online to view related products.

Product Description

NuPAGE® Bis-Tris Gels are precast polyacrylamide gels designed for optimal separation and resolution of small- to medium-sized proteins (1.5–300 kDa) under denaturing gel electrophoresis conditions.

NuPAGE® Bis-Tris Midi Gels are available in the following variations, with or without Midi Gel Adapters:

- **Polyacrylamide percentages**: 8%, 10%, and 4–12%
- **Well formats**: 20 and 26 wells
- **Thickness**: 1.0 mm

Important Guidelines

- Use the NuPAGE® MES SDS Running Buffer for small proteins or NuPAGE® MOPS SDS Running Buffer for medium-size proteins.
- The Midi Gel Adapter is only for use with Midi Gels in the Criterion™ Cell gel running tank.
- Use the Midi Gel Cassette/Adapter assembly within 1 hour of assembling. Discard the adapter after one use.

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.

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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 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 and conversion 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 polyacrylamide gels in a choice of nine well formats and two thicknesses. When loading large samples (>30 µL), a thicker gel with fewer wells is more appropriate; Bolt™ Bis-Tris Plus gels are the best choice when loading large samples. When blotting, however, proteins will transfer more easily from a thinner gel.

Choosing a Protein Standard for your Application

Choose a Life Technologies™ standard based on your experiment:

Pre-stained: SeeBlue® Plus2 Pre-Stained Standard or Novex® Sharp Pre-Stained Standard

Unstained: Novex® Sharp Unstained Protein Standard or Mark12™ Unstained Standard

Western: MagicMark™ XP Western Protein Standard

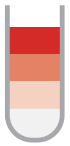
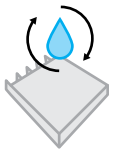
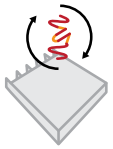
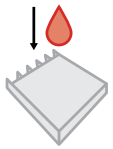
For all other specialty standards, please view further information here.

Limited Product Warranty and Disclaimer Details

life technologies™

NuPAGE® Bis-Tris Midi Gel Electrophoresis Protocol

Follow the procedure below to prepare for and perform SDS polyacrylamide gel electrophoresis using NuPAGE® Bis-Tris Midi Gels.

Timeline	Steps	Procedure Details
1 	**Prepare samples**	See table below
2 	**Prepare buffers**	Add 50 mL of 20X NuPAGE® MES or MOPS SDS Running Buffer to 950 mL of deionized water to prepare 1X SDS Running Buffer. For reduced samples, prepare the running buffer for the Upper Buffer Chamber by adding 500 µL of NuPAGE® Antioxidant to 200 mL 1X SDS Running Buffer.
3 	**Prepare gels**	a. If using the Criterion™ Cell (Bio-Rad), attach the Midi Gel Adapter to the Midi Gel Cassette. b. Remove the comb, and rinse the gel wells three times using 1X Running Buffer. c. Remove the white tape near the bottom of the gel cassettes. d. Place the gels in the gel running tank. e. Fill the gel wells with the same 1X Running Buffer that you will use in the Upper Buffer Chamber.
4 	**Load gels**	Load the appropriate volume and protein mass of your sample on the gel. Then, load your standards.
5 	**Load buffers**	If using the XCell4 *SureLock*™ Midi-Cell, fill each Upper Buffer Chamber with 175 mL and the Lower Buffer Chamber to the fill line with the appropriate 1X Running Buffer. If using the Criterion™ Cell, fill the Upper (60 mL) and Lower (400 mL each) Buffer Chambers with the appropriate 1X Running Buffer.
6 	**Run**	**Note:** If you are not using a Life Technologies™ power supply, install the Novex® Power Supply Adapters (Catalog number ZA10001). When using MES Running Buffer, run at 200 V constant for 40 minutes with the XCell4™ or 35 minutes with the Criterion™ Cell. When using MOPS Running Buffer, run at 200 V constant for 55 minutes with the XCell4™ or 40 minutes with the Criterion™ Cell.

Procedure Details — Step 1: Prepare samples

Components	Reduced Sample	Non-Reduced Sample
Sample	x µL	x µL
NuPAGE® LDS Sample Buffer (4X)	2.5 µL	2.5 µL
NuPAGE® Reducing Agent (10X)	1 µL	--
Deionized Water	to 6.5 µL	to 7.5 µL
Total Volume	10 µL	10 µL

Heat samples at 70°C for 10 minutes.
Prepare 1X Sample Buffer for dilutions of samples, if needed.