# Novex™ Tris-Glycine Plus Midi Gels

invitrogen

QUICK REFERENCE Pub. No. MAN0015862 Rev. A.0

Print Options

## Package Contents

| Product | Quantity |
|---|---|
| Novex™ Tris-Glycine Plus Gels | Box of 10 gels |

## Storage Conditions

- Store at 2–8°C. Gels are stable for up to 12 months (depending upon gel type).
- Do not freeze.

## Required Materials

- Protein sample and standard
- Tris-Glycine Native or SDS Running Buffer (10X)
- Tris-Glycine Native or SDS Sample Buffer (2X)
- NuPAGE® Reducing Agent
- Novex™ Power Supply Adapters (Cat. no. ZA10001) if not using a Thermo Fisher Scientific™ power supply
- XCell4 *SureLock*™ Midi-Cell gel running tank or Criterion™ Cell (Bio-Rad) with Midi Gel Adapters

## Timing

**Denaturing gel electrophoresis:** 45–65 minutes

**Native gel electrophoresis:** 90–125 minutes

## Selection Guide

Protein Gels

Go online to view related products.

## Product Description

Novex™ Tris-Glycine Plus Midi Gels are precast polyacrylamide gels designed for optimal separation and resolution of small- to large-sized proteins (6–500 kDa) during electrophoresis under native or denaturing conditions, depending on the buffer.

This system is designed for use in either the XCell4 *SureLock*™ Midi-Cell gel tank or the Criterion™ Cell from Bio-Rad with Midi Gel Adapters.

Novex™ Tris-Glycine Plus Midi Gels are available in the following variations:

- **Polyacrylamide percentages:** 10%, 12%, 4–12%, 8–16%, and 4–20%
- **Well formats:** 12+2, 20, and 26 wells

## Online Resources

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

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

## Using Novex™ midi gels with the Criterion™ Cell

Midi Gel Adapters allow Novex™ Tris-Glycine Plus Midi Gels to be efficiently used with the Bio-Rad Criterion™ Cell.

See the full user guide for detailed instructions on attaching the Midi Gel Adapter.

Use the Midi Gel Cassette/Adapter assembly within 1 hour of assembly.

Discard the adapter after one use.

## Recommended protein standards

The following ladders are available from Thermo Fisher Scientific. For details on these products and others, visit thermofisher.com

| Type | Standard | Cat. No. |
|---|---|---|
| Prestained ladder | PageRuler Prestained Protein Ladder<br>PageRuler Plus Prestained Protein Ladder | 26616<br>26619 |
| Unstained ladder | PageRuler Unstained Protein Ladder<br>PageRuler Unstained Broad Range Protein Ladder<br>NativeMark Unstained Protein Ladder | 26614<br>26630<br>LC0725 |
| Western blot ladder | MagicMark XP Western Protein Standard | LC5602 |

## Novex™ Tris-Glycine Plus Midi Gel migration chart

Refer to the migration chart in the pop-up window 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 proteins of interest have unknown or a wide range in molecular weight, gradient gels are recommended.

## Well formats and recommended loading volumes

## Limited product warranty and disclaimer details

**Corporate entity**: Life Technologies | Carlsbad, CA 92008 USA | Toll Free in USA 1.800.955.6288

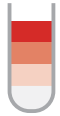


ThermoFisher SCIENTIFIC

# Novex™ Tris-Glycine Plus Midi Gel electrophoresis protocol (denaturing gel)

Follow the procedure below to perform denaturing SDS polyacrylamide gel electrophoresis using Novex™ Tris-Glycine Plus Midi Gels.

## Step 1 — Prepare samples



a. Combine the following components in a clean microcentrifuge tube based upon the type of gel to be used.

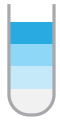
| Component | Denaturing gel |
|---|---|
| Sample | x µL |
| Tris-Glycine SDS Sample Buffer (2X) | 5 µL |
| Deionized Water | to 4 µL |
| Total Volume | 10 µL |

b. (Optional) Add NuPAGE® Reducing Agent (10X) to 1X for reduced samples.

c. Heat samples at 85°C for 2 minutes.

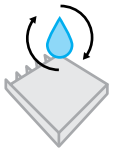
d. Dilute samples in 1X Sample Buffer as needed.

## Step 2 — Prepare SDS running buffer



Add 100 mL 10X Tris-Glycine SDS Running Buffer to 900 mL of deionized water to prepare 1X Tris-Glycine SDS Running Buffer.

## Step 3 — Prepare gel



a. If using the Criterion™ Cell (Bio-Rad), attach the Midi Gel Adapter to the Midi Gel Cassette.

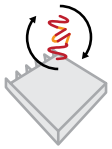
b. Remove the comb, and rinse the gel wells three times using 1X Tris-Glycine SDS Running Buffer.

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 Tris-Glycine SDS Running Buffer to be used in the Upper Buffer Chamber.

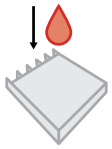
## Step 4 — Load samples and standards



Load the appropriate volume and protein mass of your sample on the gel.

Then, load your standards.

## Step 5 — Add SDS running buffer



Fill buffer chambers with 1X Tris-Glycine SDS Running Buffer according to the following table.

| | XCell4 *SureLock*™ Midi-Cell | Bio-Rad Criterion™ Cell |
|---|---|---|
| Upper Buffer Chamber(s) | 175 mL each | 60 mL |
| Lower Buffer Chamber(s) | Add to fill line | 400 mL each |

## Step 6 — Run gel

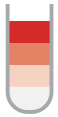
| | XCell4 *SureLock* Midi-Cell | Bio-Rad Criterion Cell |
|---|---|---|
| Voltage | 200 V | 200 V |
| Run time | 55–65 minutes | 45–55 minutes |
| Expected current | 70–75 mA (start); 35–40 mA (end) | 95–105 mA (start); 35–50 mA (end) |

**Note**: Run times and currents are dependent on gel percentage, power supply and electrophoresis device.

# Novex™ Tris-Glycine Plus Midi Gel electrophoresis protocol (native gel)

Follow the procedure below to perform native polyacrylamide gel electrophoresis using Novex™ Tris-Glycine Plus Midi Gels.

## Step 1 — Prepare samples



a. Combine the following components in a clean microcentrifuge tube based upon the type of gel to be used.

| Component | Native gel |
|---|---|
| Sample | x µL |
| Tris-Glycine Native Sample Buffer (2X) | 5 µL |
| Deionized Water | to 5 µL |
| Total Volume | 10 µL |

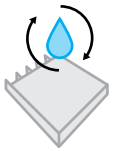
**b. Do not heat samples for native gels**.

c. Dilute samples in 1X Native Sample Buffer as needed.

## Step 2 — Prepare native running buffer

Add 100 mL 10X Tris-Glycine Native Running Buffer to 900 mL of deionized water to prepare 1X Tris-Glycine Native Running Buffer.

## Step 3 — Prepare gel



a. If using the Criterion™ Cell (Bio-Rad), attach the Midi Gel Adapter to the Midi Gel Cassette.

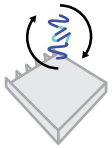
b. Remove the comb, and rinse the gel wells three times using 1X Tris-Glycine Native Running Buffer.

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 Tris-Glycine Native Running Buffer to be used in the Upper Buffer Chamber.

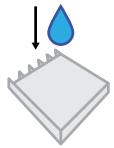
## Step 4 — Load samples and standards



Load the appropriate volume and protein mass of your sample on the gel.

Then, load your standards.

## Step 5 — Add native running buffer



Fill buffer chambers with 1X Tris-Glycine Native Running Buffer according to the following table.

| | XCell4 *SureLock*™ Midi-Cell | Bio-Rad Criterion™ Cell |
|---|---|---|
| Upper Buffer Chamber(s) | 175 mL each | 60 mL |
| Lower Buffer Chamber(s) | Add to fill line | 400 mL each |

## Step 6 — Run gel

| | XCell4 *SureLock* Midi-Cell | Bio-Rad Criterion Cell |
|---|---|---|
| Voltage | 125 V | 125 V |
| Run time | 105–125 minutes | 90–105 minutes |
| Expected current | 35–40 mA (start); 15–20 mA (end) | 50–60 mA (start); 5–20 mA (end) |

**Note**: Run times and currents are dependent on gel percentage, power supply and electrophoresis device.