

ProteinEle® Precast Tris-Glycine Gel (4-20%)

Please read the manual carefully before use.

Cat. No. DG101

Version No. Version 2.1

Storage: at 2°C-8°C for one year

Description

ProteinEle® Precast Tris-Glycine Gel is a 4-20% continuous gradient polyacrylamide precast gel formulated with a neutral pH buffer system, showing high resolution and good stability. Using Tris-glycine buffer, this product is suitable for separation of native and denatured proteins. It is easy to use and simple to install, and fits mini gel tanks which are popular and widely used.

Highlights

- High resolution
- Good stability

Specifications

Cat. No.	Specification
DG101-01-V2	4-20%, 1.0 mm, 10 wells, 10 Pieces/Box; Gel opener: 1 pc
DG101-02-V2	4-20%, 1.0 mm, 15 wells, 10 Pieces/Box; Gel opener: 1 pc

Procedures (Taking denaturing electrophoresis as an example)

1. Remove the precast gel from the package and **peel off the sealing tape at the bottom.**
 2. Insert the precast gel into the core of the electrophoresis tank.
 3. Prepare 500 ml of 1× Tris-Glycine denaturing running buffer.
 4. Add running buffer into the electrophoresis tank. Ensure the inner chamber is completely filled, and the outer chamber buffer covers at least 1/3 of the gel plate height, but does not exceed the top of the gel. Then gently pull out the comb.
 5. Rinse each sample well gently with a pipette to remove any residual gel solution.
 6. Sample loading: **The maximum loading volume per well of 10-well and 15-well gels is 50 µl and 30 µl, respectively.** Mix the protein sample with 5× denaturing Loading buffer at a 4:1 ratio thoroughly, followed by heat treatment.
- Note: Avoid puncturing the gel with pipette tips, and do not insert the tip too deeply into the well to prevent gel deformation and leakage.
7. Electrophoresis conditions: Run at 180 V for 60 minutes. Stop electrophoresis when the bromophenol blue tracking dye reaches the bottom of the gel or the desired position.
 8. Remove the gel cassette after electrophoresis, and pry the two plastic gel plates apart using a gel opener to transfer the gel.

Notes

1. If using ultra-fast electrophoresis buffer, the electrophoresis can be completed in just 20 minutes at 220 V.
2. For sharper and straighter protein bands, reduce the voltage to 150 V and extend the running time as needed.
3. When running at 180 V, the initial current is approximately 75 mA for a single gel and 150 mA for two gels, decreasing gradually during the run.
4. Reuse of running buffer is not recommended. After electrophoresis, the ionic strength and buffering capacity of the buffer will change, potentially affecting separation performance.
5. Recommended wet transfer conditions: 120 V constant voltage for 60-90 minutes or 300 mA constant current for 90-120 minutes. For small proteins (≤ 50 kDa), transfer for 90 minutes; for large proteins, transfer for 120 minutes or longer. For optimal transfer efficiency, evaluate transfer performance using the prestained marker bands on both the gel and the membrane, and adjust conditions as needed. Transfer efficiency is influenced by factors such as target protein molecular weight, gel concentration, and methanol concentration in the transfer buffer. It is recommended to use a low percentage gel for large proteins.

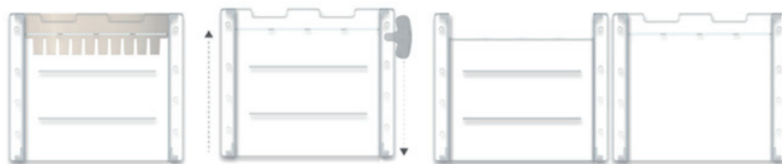


6. It is recommended for the separation of proteins between 10 kDa and 300 kDa.
7. This product is for research use only, not for clinical diagnosis or therapy, nor for use in food or drugs, and should not be stored in residential areas.
8. For your safety and health, please wear a lab coat and disposable gloves during the operation.
9. If a transparent film is present on the gel surface after opening the cassette, it is a separation layer that helps detach the gel from the plate and does not affect electrophoresis performance. Before performing the transfer, it is recommended to gently remove it with forceps to ensure efficient transfer.

Shipping and storage conditions

1. Shipped at room temperature.
2. Store at 2–8 °C for up to one year.
3. Do not store below 0 °C. Exposure to temperatures below 0°C will cause the gel to freeze, resulting in bubbles and cracks, rendering it unusable.

Open the gel cassette



A list of the compatible instruments for these gels

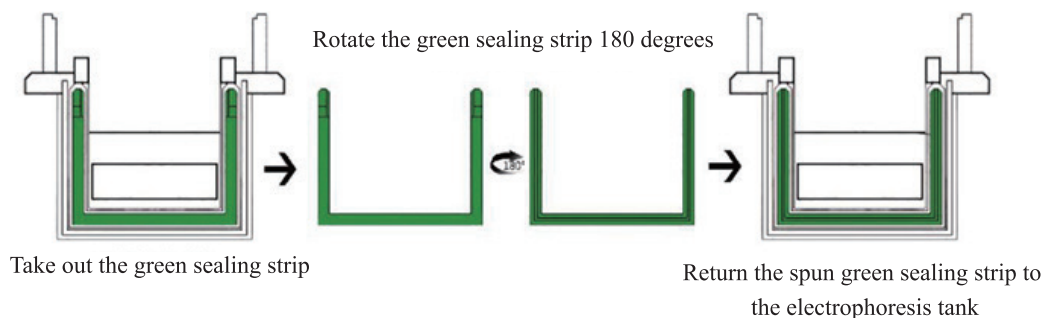
- Bio-Rad Mini-PROTEAN (II/3 /Tetra System)
- Hoefer Mighty Small (SE 250/ SE 260/ SE 280)
- **TransGen (TSE-P200/P400)**
- Other electrophoresis tanks with gel plates width of 10 cm.

Additionally, please note that the following instruments require custom baffle plates to be used:

Baffle plate 1 (TSE-SBP1) is compatible with Thermo Life Technology Novex Mini-Cell.

Baffle plate 2 (TSE-SBP2) is compatible with Thermo Life Mini Gel Tank.

In order to be compatible with a variety of small electrophoresis tanks, the joint between the precast gel and the U-shaped sealing strip of the electrophoresis tank (such as the electrophoresis tanks of Bio-Rad, Tanon and other companies) has been improved. **It is recommended to take out the sealing strip with raised structure and install it in reverse before electrophoresis, so that the smooth side faces outward to prevent liquid leakage (as shown in the figure below).**



For research use only, not for clinical diagnosis.

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