One-Step PAGE Gradient Gel Fast Preparation Kit

E306

Version 25.1

Product Description

One-Step PAGE Gradient Gel Fast Preparation Kit is designed for SDS - polyacrylamide gel electrophoresis (SDS - PAGE). This product features a premixed formulation that enables direct pouring of the upper gel after casting the lower gel, eliminating the need for an additional sealing layer. Rapid gelation is achieved within 10 min, and the upper gel is brightly colored. These features together facilitate sample loading. An innovative formulation is adopted to be compatible with conventional Tris - Glycine electrophoresis buffer, enabling the gradient separation of proteins ranging from 10 to 250 kDa and significantly improving band resolution. The entire electrophoresis process only takes 35 - 50 min, eliminating the cumbersome step of traditional gel concentration adjustment and significantly improving the efficiency of protein detection by Western Blot.

Components

Components	E306-01 (125 gels/0.75 mm)
Stacker A	80 ml
Stacker B	80 ml
Resolver A	250 ml
Resolver B	250 ml
APS	12 ml

Storage

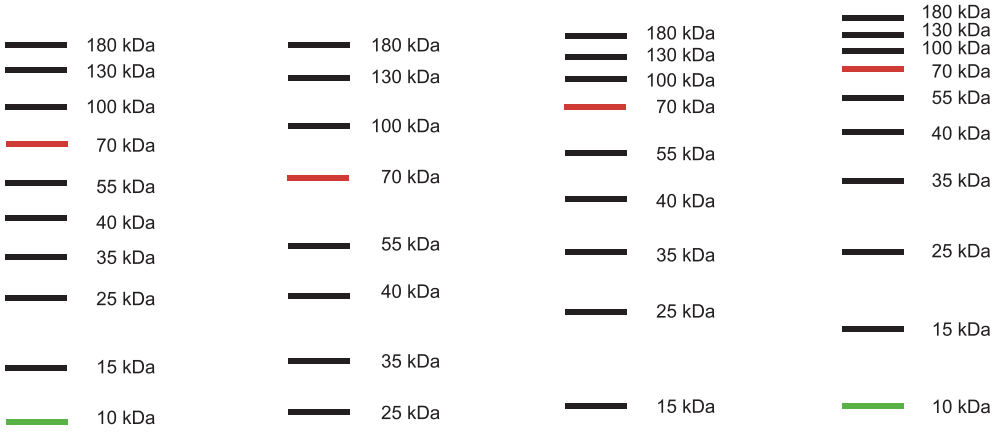
Store at 2 ~ 8°C and protect from light. Ship on ice pack.

Applications

It is applicable for the preparation of polyacrylamide gels, which can be used for denaturing or non-denaturing PAGE electrophoresis.

Notes

1. This product offers good buffer compatibility, with Tris - Glycine electrophoresis buffer being the recommended option for optimal performance.
2. Acrylamide is neurotoxic. Please wear a lab coat, disposable gloves, and a mask when handling it.
3. Gelation speed is closely related to the amount of coagulant used and temperature. When preparing multiple gels at once, appropriately reduce the amount of APS used to prevent rapid gelation.
4. After improvement, APS can be stored for at least 18 months at 2 ~ 8°C.

Concentration	E306 (4% - 20%)	8%	10%	12%
Bands				

▲ The above is a schematic diagram of the electrophoresis results of 180 kDa Prestained Protein Marker (Vazyme #MP102) on E306 and single-concentration gel in the Tris - Gly electrophoresis buffer system. It is for reference only.

Experiment Process

Take the preparation of a 1.0 mm mini gel as an example.

Resolving Gel

Thickness of gel	Resolver A	Resolver B	APS
0.75 mm	2.0 ml	2.0 ml	40 µl
1.0 mm	2.7 ml	2.7 ml	60 µl
1.5 mm	4.0 ml	4.0 ml	80 µl

Stacking Gel

Thickness of gel	Stacker A	Stacker B	APS
0.75 mm	0.5 ml	0.5 ml	10 µl
1.0 mm	0.75 ml	0.75 ml	15 µl
1.5 mm	1.0 ml	1.0 ml	20 µl

1. Please mix each component by inversion 6 - 8 times before use.
2. Lower gel preparation: Take equal volumes of Resolver A and Resolver B, 2.7 ml each, and mix well.
3. Upper gel preparation: Take equal volumes of Stacker A and Stacker B, 0.75 ml each, and mix well.
4. Add 60 µl of APS to the mixed solution from step 2, and immediately mix well by inversion; add 15 µl of APS to the mixed solution from step 3, and immediately mix well by inversion.
5. Quickly inject the lower gel into the glass plate for gel preparation till the liquid surface is about 1.0 cm away from the top edge of the short glass plate. Gently inject the upper gel solution that has been mixed well into the glass plate for gel preparation without waiting for the lower gel to solidify, and insert the comb teeth gently.
   - ▲ Mix well without vortexing, and avoid introducing bubbles into the glass plate for gel preparation during pouring.
   - ▲ After pouring the lower gel, the upper gel must be injected into the glass plate for gel preparation within 2 min to prevent the lower gel from solidifying and causing an uneven liquid surface.
   - ▲ The upper gel solution can be gently injected along the long glass plate to avoid dispersing the lower gel.
   - ▲ At room temperature (25°C), rapid gelation can be achieved within 10 min.
6. Remove the comb teeth after gelation, and the gel is immediately available for electrophoresis. The recommended electrophoresis voltage is 150 - 200 V. Stop the electrophoresis when the bromophenol blue indicator reaches the bottom edge.
   - ▲ Electrophoresis can be completed after separation at 150 - 200 V for 35 - 50 min.

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