Stain Free SDS-PAGE Gel Casting Kit(12%)

Cat: G4843
Size: 40T(0.75mm)/100T(0.75mm)
Storage: 2-8℃, avoid light,valid for 1 year.

Kit Components

Reagent		40T	100T	Storage
Reagent(A): Stacking Gel Casting Solution	A1:SG Stock Solution	30mL	80mL	2-8℃, avoid light
	A2:SG Diluent Solution	30mL	80mL	2-8℃
Before use, mix A1 and A2 equally to prepare Reagent(A): Stacking Gel Casting Solution which can be stored at 2-8 ℃ for 1 week.				
Reagent(B): Resolving Gel Casting Solution	B1:RG Stock Solution	80mL	2×100mL	2-8℃, avoid light
	B2:RG Diluent Solution	80mL	2×100mL	2-8℃
Before use, mix B1 and B2 equally to prepare Reagent(B): Resolving Gel Casting Solution which can be stored at 2-8 ℃ for 1 week.				
Reagent(C): PAGE Gel Initiator		0.22g	0.6g	2-8℃
Before use, prepare 10% Initiator Solution(dissolve 0.22g in 2.2mL distilled water, dissolve 0.6g in 6mL distilled water), which can be stored at 2-8 ℃ for 3 months. (See Note 4)				

Introduction

The Stain Free SDS-PAGE Gel Casting Kit provides various reagents required for preparing protein denaturing and electrophoresis gel. Users can prepare SDS-PAGE Color Gel for protein electrophoresis simply by preparing their own gel preparator and distilled water. The kit can prepare about 20-40 electrophoretic gel according to the thickness of different gel making plates.

The gel prepared by this kit is applicable to the electrophoresis of Tris glycine system. The SDS-PAGE gel can be prepared without adding TEMED. The stacking gel is added with colored pigment, and the sampling hole is clear and easy to identify, which is convenient for loading. The improved lower glue (separation glue) can be significantly layered with the upper glue, and the upper glue can be directly poured without blocking with water or alcohol reagent after pouring the lower glue, and coagulate at the same time, reducing the mixing time. After electrophoresis or film transfer, the whole gel can be taken off and immersed in buffer solution and placed in a gel imager to directly image and observe the electrophoresis condition and film transfer efficiency, without affecting the subsequent chemiluminescence or omics detection, which is helpful to improve the detection efficiency.

Protocols(*for reference only*)

The stacking gel concentration of this product is 5%, and the resolving gel concentration is 12%. If you need other concentrations, please purchase G4840-G4845. The color of SG diluent is distributed randomLy. SG diluents of different colors can be mixed. If other colors are needed, G4830-G4833 can be purchased.

1. Assemble the glue making mold. Take a piece of 1.50 mm thick mini glue as an example for the following steps. (See Table 1 for 0.75 mm and 1.00 mm data).

Gel Plate Size	0.75mm	1.00mm	1.5mm
Stacking Gel Casting Solution	1.4mL	2mL	2.8mL
10% Initiator Solution	14uL	20uL	28uL
Resolving Gel Casting Solution	4mL	5.4mL	8mL
10% Initiator Solution	40uL	54uL	80uL

Table 1 Recommended amount of gel for rubber making plates with different thicknesses

2. Take 4mL of RG Stock Solution and 4mL of RG Diluent Solution , put them into the dispensing cup and mix them evenly to make the Resolving Gel Casting Solution.
3. Take 1.4mL of SG Stock Solution and 1.4mL of SG Diluent Solution, put them into the dispensing cup and mix them well to prepare the Stacking Gel Casting Solution.
4. Add 10% Initiator Solution 80uL to the Resolving Gel Casting Solution. Gently stir or shake the mixture to avoid bubbles. (*See Note 2*)
5. Add the Resolving Gel Casting Solution mixed in step 4 into the gel making mold, so that the liquid level is about 1.5 cm away from the upper edge of the glass plate.
6. Add 28uL of 10% Initiator Solution to Stacking Gel Casting Solution, gently stir or shake it to mix it, so as to avoid bubbles. It is not necessary to wait for the lower layer of glue to solidify, but slowly pour the mixed solution onto the lower layer of glue solution, and insert the comb. (*Note: after the Resolving Gel Solution is*

added, the Stacking Gel Solution should be slowly injected into the gel mold within 2 minutes to prevent the Stacking gel and the Resolving Gel from mixing together. If bubbles are generated by careless filling of the stacking gel, it can be gently swept with the gun head.)

7. Let it stand at room temperature (25℃) for about 15 min, wait for the stacking gel to completely solidify, carefully pull out the comb, and then carry out the routine electrophoresis operation.
8. Non staining imaging can be performed on the gel and film after electrophoresis, film transfer, and before exposure to observe the electrophoresis status, film transfer efficiency, and total protein bands.
9. Dye free related imaging can be observed by the Stain-Free module of gel imaging or membrane imaging can be directly selected for Bio-red series instruments to image, and the No-stain module under Protein Gels imaging can be selected for iBright series instruments to image. For other instrument imaging conditions, please consult our technical support.

Note

1. When adding liquid to the glue maker, it must be added slowly to avoid the generation of bubbles.
2. The addition amount of Initiator Solution is directly related to the setting time. The addition proportion in the operation steps can ensure that the full gel gel is completed in 10-20min. If it is necessary to prepare multiple pieces of gel at the same time, it is recommended to appropriately reduce the proportion of Initiator Solution added (±20%)or to use a pressure agent to configure the gel layer by layer.
3. The resolution and electrophoresis aesthetics of protein bands are related to the electrophoresis conditions. If you want to produce clear and beautiful bands, it is recommended that the voltage be 100-120V during electrophoresis. If you need fast electrophoresis, you can properly pressurize it to 160-200V. At high voltage, it is recommended that you use ice bath electrophoresis to prevent gel burning.
4. If the prepared 10% Initiator Solution needs to be stored for a long time, it is recommended to store it in separate packages at - 20 ℃ for 1 year.
5. The colored upper layer glue contains dye. Due to the nature of the dye itself, sediment may occur after long-term standing. Please be careful to mix well before use.
6. The storage conditions and validity period of the product are calculated based on the unopened condition. In order to prevent the chemical reaction between the product and the air from affecting the product performance, the unused components are stored according to the storage requirements, and it is recommended that the unsealed components be used as soon as possible.
7. This product is only applicable to denatured protein gel electrophoresis. Please select other products of our company for non denatured protein gel electrophoresis..
8. For your safety and health, please wear experimental clothes and disposable gloves.