

★ Storage

Safe-Pinky DNA gel Staining Solution is a very stable dye. We recommend that you store the 10,000X solution in water at a lower temperature such as 4°C. Dye precipitation may occur during prolonged low temperature storage. When this occurs, heat up the solution in a hot water bath at 45°C to 50°C for two minutes and/or vortex the solution. The 3X working solutions of the dye may also be stored at room temperature in a dark place for at least one month. Exposure to light should be avoided during long-term storage. However, the dye can be handled under ambient light without any problem during staining.

✦ Contents

- Product Manual
- Safe-Pinky DNA Gel Staining Solution (10,000X) in water

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★ Shipping Condition

Ship with ice pack.

★ Introduction

Safe-Pinky DNA Gel Staining Solution is a sensitive, stable and environmentally safe fluorescent nucleic acid dye designed to replace the highly toxic ethidium bromide (Et-Br) for staining dsDNA, ssDNA or RNA in agarose gels or polyacrylamide gels. Safe-Pinky DNA gel Staining Solution is far more sensitive than Et-Br without requiring a destaining step. Safe-Pinky DNA Gel Staining Solution and Et-Br have virtually the same spectra, so you can directly replace Et-Br with Safe-Pinky DNA Gel Staining Solution without changing your existing imaging system. If you use a green fluorescent gel stain such as SYBR Green I, SYBR Safe or GelStar with a UV transilluminator for viewing gels, you may replace the dye and continue to use the existing SYBR filter or GelStar filter for photographing. However, Safe-Pinky DNA Gel Staining Solution can not be sufficiently excited with a 488nm argon laser or similar visible light and therefore is not recommended for use with a gel reader equipped with such visible light.

★ Application

As nucleic acid binding dyes can affect DNA migration during electrophoresis, post-staining of gels is highly recommended. Post-staining with Safe-Pinky DNA Gel Staining Solution results in superior sensitivity and eliminates the possibility of dye interference with DNA migration. Gel Staining with Safe-Pinky DNA Gel Staining Solution is compatible with downstream DNA manipulations such as digestion with a restriction enzyme, Southern blotting techniques and cloning. Safe-Pinky DNA Gel Staining Solution may be removed from DNA by ethanol precipitation.

★ Procedure

Post Gel Staining

1. Run gels as usual according to your standard protocol.
 2. Dilute the Safe-Pinky DNA Gel Staining Solution. 10,000X stock reagent ~3.300 fold to make a 3X staining solution in H₂O with 0.1M NaCl (e.g., add 15ul of Safe-Pinky DNA Gel Staining Solution. 10,000X stock reagent and 5ml 1M NaCl to 45ml H₂O). While Safe-Pinky DNA Gel Staining Solution 1X Staining Solution can also be used for post gel staining, the sensitivity is generally less than with 3X staining solution.
- Note:** Inspect the 10,000X vial carefully. If dye precipitation occurs, heat up or sonificate the vial.)
3. Carefully place the gel in a suitable container such as poly-propylene container. Gently add a sufficient amount of Safe-Pinky DNA Gel Staining Solution to submerge the gel.

Note: Use of NaCl in the staining solution is optional. Including NaCl in the staining solution enhance the staining, but may promote dye precipitation if the staining solution is to be used repeatedly. Any staining solution to be reused is preferably stored at room temperature in a dark place to reduce possible dye precipitation problem.

4. Agitate the gel gently at room temperature for ~30 minutes. Optimal staining time may vary somewhat depending on the thickness of the gel and the percentage of agarose. For poly-acrylamide gels containing 3.5-10% acrylamide, typical staining time is 30 min to 1 hour with gels of higher acrylamide content resued at least 2-3 time. The unused staining solution can be stored at room temperature in a dark place.
5. View the stained gel with a standard transilluminator (302 or 312 nm) and photograph the gel using an ethidium bromide filter. Similarly, a SYBR or GelStar filter may also be used for photographing with equally good results.

Precasting Gel

1. Prepare agarose gel solution using your standard protocol.
2. Dilute the Safe-Pinky DNA Gel Staining Solution 10,000X stock reagent into the agarose gel solution (10,000X stock reagent added to 50ml of the gel solution). Since Safe-Pinky DNA Gel Staining Solution is generally thermally stable, the 10,000X stock reagent can be added while the gel solution is still hot (no need to wait for the gel solution to cool down prior to dye addition). Make sure that the dye is thoroughly mixed with the gel solution by swirling, stirring, or inversion.

Note: Inspect the 10,000X vial carefully. If dye precipitation occurs, heat up sonicate the vial.

Alternatively, the Safe-Pinky DNA Gel Staining Solution stock reagent may be pre-combined with agarose powder and a buffer of your choice followed by microwaving or other heating procedures commonly used for preparing agarose gels. Safe-Pinky DNA Gel Staining Solution is comparable with all commonly used electrophoresis buffers.

3. Cast the gel and allow it to solidify. Any leftover gel solution may be stored and re-heated later for additional gel casting. Since Safe-Pinky DNA Gel Staining Solution is hydrolytically stable, Safe-Pinky DNA Gel Staining Solution precast gels may be prepared in large quantities and stored for later use. To avoid mold formation, we recommend that the precast gels be stored in a refrigerator.

★ Related Product

Product Name	Cat No
Agarose Sepro	A0224
100bp PCR Ranger DNA Marker, 100bp-To-30kb	D1108
1kb PCR Ranger DNA Marker, 75bp-to-20kb	D1109
iVDye 50bp DNA Ladder	V1001
iVDye 100bp DNA Ladder	V1002
iVDye 1kb DNA Ladder	V1003
dNTP Mixtures, 10mM Each	D0610
amfiSure PCR Master Mix (2X)	P0311
amfiSure Primer PCR Master Mix (2X)	P1311
amfiSure PCR Master Mix (2X)	P2311
amfiSure Direct PCR Lysis Buffer	D0300
amfiEco Taq DNA Polymerase	P0701
SafePinky DNA Gel Staining Solution	S1001
amfiSure qGreen Q-PCR Master Mix (2X), w/o ROX	Q5600
amfiSure qGreen Q-PCR Master Mix (2X), w Fluorescein	Q5601
amfiSure qGreen Q-PCR Master Mix (2X), High ROX	Q5602
amfiSure qGreen Q-PCR Master Mix (2X), Low ROX	Q5603