GreenStar™ Nucleic Acid Staining Solution I

[Cat. No.] C-9036

Introduction

GreenStar™ Nucleic Acid Staining Solution I is a nucleic acid staining reagent for TAE/TBE agarose gel and it is safer than traditional ethidium bromide (EtBr) method. It has a fluorescence excitation wavelength at 496 nm and emission wavelength at 522 nm. For DNA detection, this staining solution should be used with either UV or blue light transilluminator. It is compatible with DUALED Blue/White Transilluminator (Cat. No. A-6020), which is recommended for higher sensitivity. 50 ml volume of the solution is provided at 200X concentration and can be used up to 100 times. This product is used for pre-casting gel and post staining. With its high sensitivity, nucleic acids can be seen clearly even at a concentration below 5 ng/band.

Features & Benefits

- Safety: Harmless fluorescent dyes capable of serving as a safe replacement for EtBr solution, which have a risk of causing DNA mutation
- High sensitivity: Highly sensitive fluorescent dyes allowing observation of nucleic acids even in miniscule quantities less than 5 ng/band (DUALED Blue/White Transilluminator is recommended)
- Low DNA damage: Minimized DNA damage during detection process through the use of DUALED Blue/White Transilluminator when observing nucleic acid
- Convenience: Same procedure as using EtBr solution (de-staining not required)
- Reproducibility: Meticulous production and stringent QC processes under ISO 9001 quality management systems provide reproducible test results.

Storage

Store at -20-4°C in small aliquots in amber tubes/bottles. If stored in the recommended temperature, this product will be stable until the expiration date printed out on the label.

Precautions

Common Application

- *GreenStar*™ Nucleic Acid Staining Solution I should be stored at -20-4°C in the dark condition to protect fluorescent dye from degradation.
- This reagent may be precipitated from solution. If so, heat for 5 min at 45-50°C and vortex to redissolve.

Pre-casting Method

- The DNA samples do not to go over the concentration of 20 ng/lane.
- When using pre-casting gels, use gels within 24 hrs.

Post-staining Method

- Recommended gel thickness is less than 0.5 cm.
- Concentration and staining time can be adjusted according to the required conditions.
- Repeated use of staining solution may decrease staining ability. If so, make fresh staining solution and use it.

Online Resources

Korean **English**

Visit our **product page** for additional information and protocols.

Ordering Information

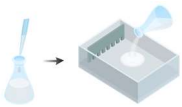
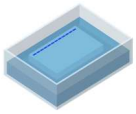
Description		Cat. No
GreenStar™ Nucleic Acid Staining Solution I	50 ml	C-9036

Notice

BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols

Experimental Procedures

Steps		Procedure Details
Pre-casting gel method		
1	 **Dissolve agarose powder**	1. Completely dissolve by heating 1 g of agarose powder in 100 ml 0.5X TBE or 1X TAE buffer to make a 1% agarose gel. * **Note:** This product can be applied for non-denaturing polyacrylamide.
2	 **Add solution and make it hard**	2. Add 1/200-fold amount (500 µl) of concentrated *GreenStar*™ Nucleic Acid Staining Solution I to get the solution, preferably when it is lukewarm. Allow it to stand until the gel becomes hard.
3	 **Analyze the bands**	3. Perform electrophoresis using either agarose or non-denaturing polyacrylamide gel. 4. Bands can be detected with UV or blue light transilluminator.
Post-staining method • Post-staining is recommended for an exact mobility of nucleic acid or for large amount of nucleic acid.		
1	 **Perform electrophoresis**	1. Perform electrophoresis using either agarose or non-denaturing polyacrylamide gel.
2	 **Stain the gel**	2. Dilute the concentrated *GreenStar*™ Nucleic Acid Staining Solution I by 20-200 folds in TAE/TBE buffer. * **Note:** It is advised to use a plastic container, rather than glass one which could be stained by the staining solution. 3. After running nucleic acid on an agarose gel, transfer it to the diluted staining solution. Incubate it in a dark room for 10-40 min. Destaining is not required.
3	 **Analyze the bands**	4. Bands can be detected with UV or blue light transilluminator. 5. Store the diluted staining solution in a dark container for re-use. It can be used up to 2-3 times.