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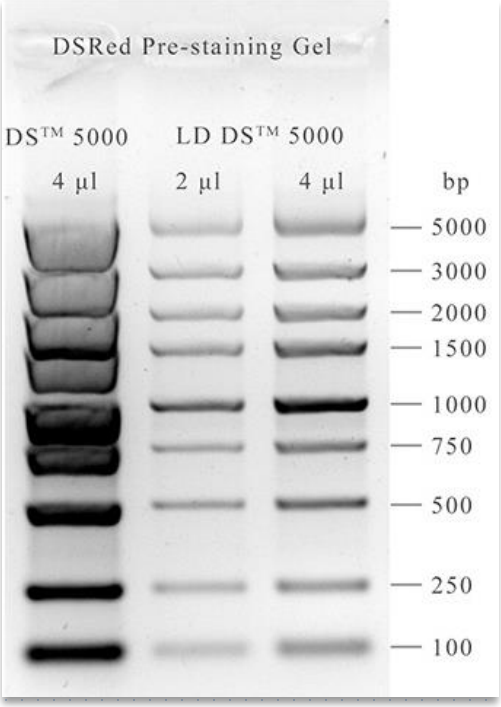
DSRed Colorante para ácidos nucleicos: DNA Y RNA, 500ul



Description

DSRed is a sensitive, stable and non-toxic fluorescent nucleic acid dye for staining nucleic acids (dsDNA, ssDNA, RNA) in agarose gels and polyacrylamide gels. DSRed has a sensitivity higher than EB (Ethyl Bromide). DSRed binds nucleic acid molecules by intercalation, and is nonmutagenic at working concentrations, is safer and more environment-friendly than EB.

Safety Description: This product has a special molecular structure and cannot pass through cell membranes or latex gloves. This product has passed biosecurity tests, is nonmutagenic at working concentrations. And it is environmentally safe and can be dumped directly into sewers.

Storage:

Store at room temperature, protected from light. DSRed is stable for at least one year from the date it is received.

Staining Protocols

Because nucleic acid molecules bind to the dye, it affects their own migration in the electrophoresis process, and also causes the adjacent nucleic acid bands to interact with each other, it is more recommended to use post-staining. For polyacrylamide gels, post-staining is also recommended.

1. Precast Protocol for Agarose Gel

1.1 Prepare agarose gel according to your standard protocol;
1.2 Add the appropriate amount of DSRed to the melted agarose to make it 1×, mix thoroughly. Such as 50 ml agarose gel solution requires the addition of 5 µl 10,000× DSRed;
1.3 Pour the gel out and allow it to solidify;
1.4 Load samples and run the gels according to your standard protocol;
1.5 View the stained gel through the gel transilluminator (302 nm) and save photos.

2. Post-Staining Protocol

2.1 Run gels according to your standard protocol;
2.2 Dilute 10,000× DSRed solution 3,300 fold to make 3× staining solution in H_2O. For example, 50 ml of 3× staining solution contains 15 µl 10,000× DSRed;

Note: dilute 10,000× DSRed solution by 0.1 M NaCl can enhance sensitivity, but may promote to precipitation if the gel stain is reused.

2.3 Put the gel in a suitable container, such as a polypropylene container, and add a sufficient amount of 3× staining solution to submerge the gel;
2.4 Shake the gel gently at room temperature for about 30 minutes;

Note: The staining time is related to the gel thickness and agarose concentration. For polyacrylamide gels containing 3.5%-10% of acrylamide, it usually takes 30 minutes to 1 hour.

2.5 Wash the stained gel gently with water to reduce background;
2.6 View the stained gel through the gel transilluminator (302 nm) and save photos.

Note: Staining solution can be reused at least 2-3 times. Store at room temperature, protected from light.

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Note

1. The structure of DSRed is proprietary and is difficult to penetrate the cell membrane, it's safer than EB, but also has a bigger impact on DNA migration than other smaller dyes. Therefore, in order to avoid discrepant migration of DNA fragments, especially multi-fragments DNA Marker, we recommend using post-staining method for dyeing.

2. DSRed is prone to precipitate at low temperatures, so store at room temperature. In the event of precipitation, the dye can be heated to 45-50℃, 2 minutes and vortex to redissolve.

3. Because DSRed has a high sensitivity, the recommended loading amount of nucleic acid samples is 50-200 ng/lane. If the brightness of the sample at a unknown concentration is too high, reduce the sample amount.

In order to adapt to the usage habits of users of precast methods, we have developed a series of LD DNA Markers for the standard DNA molecular weight of macromolecule nucleic acid dyes.

Therefore, when users precast agarose gel with noncytotoxic nucleic acid dyes such as DSRed, pair it with the DongSheng Biotech LD DNA Marker series. As shown below, the DNA Marker DSTM 5000 in the DSRed pre-stained gel is squeezed by the strips and cannot be effectively separated, while the LD DSTM 5000 bands can be separated normally.