Datasheet for ABIN2868522

Novel Green Plus (20000X) (DNA Staining Reagent)

1 Image

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Overview

Quantity:	500 µL
Application:	Agarose Gel Electrophoresis (AGE)

Product Details

Characteristics:

The Novel Green Plus provides an easy 2-step method to stain the DNA band from DNA electrophresis. This unique reagent ensures the DNA to be stained with a high sensitivity and good quality on the gel. Novel Green Plus is a next-generation DNA-binding dye with features ideal for use in quantitative real-time PCR (qPCR) and many other applications. We designed the dye by taking into consideration several essential dye properties relevant to PCR, including PCR inhibition, safety, and stability and fluorescence spectra of the dye. Ethidium bromide (EtBr), which presents sensitivity for detecting 1-5 ng double- stranded DNA (dsDNA) in the agarose gel analysis, has been the most common dye used for nucleic acid gel staining. However, several drawbacks of EtBr have been understood, including that EtBr is a mutagen/carcinogen and presents a high risk of inducing cancer. Moreover, the ultraviolet (UV) light used to illuminate EtBr-DNA compounds probably results in skin or eye damage to the user if misconducted. It's also noted that exposure to the UV light might cause chemical modifications of the DNA samples in the gel, such as the formation of TT dimmers, leading to challenges with the subsequent DNA manipulations. Reduced efficiency of transformation is observed by our scientists, after conducting ligation with the DNA samples isolated from the gel exposed to a longer period of UV illumination. As compared with EtBr, the Novel Green Plus shows a much higher sensitivity under the UV transillumination and is one of the most sensitive stains for detecting dsDNA in the agarose gel. In addition to the high sensitivity, the Novel Green Plus brings a more reliable and safer experience of use, since the stained gel can be visualized with the blue-light transilluminator, thus avoiding the risk of skin/eye damage as well as

Product Details

reducing the side effects of DNA modification caused by the UV light.

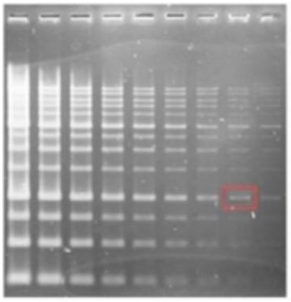
Application Details

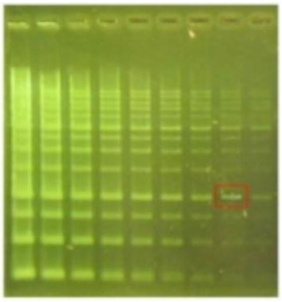
Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Storage:	-20 °C

Images





Agarose Gel Electrophoresis

Image 1. 1KB DNA Ladder was 2X serial diluted (from 1 to 256 dilution, and the concentration of the red mark is 0.72 ng/ 5uL) and loaded in the 1% agarose gel. After electrophoresis, the gel was stained for 10 min with Novel Green ***Plus***. The left-hand gel was observed with the UV 254 transilluminator and photographed by CCD camera (Fig. 1a), and the right-hand gel was observed with the blue-light transilluminator (Fig. 1b).