DNA Marker/Ladder

MD101/102/103/104

Version 22.2

Product Description

This product consists of double-stranded DNA fragments of specific molecular weight and is mixed with loading buffer containing a blue dye, which can be used as standard reference in agarose gel electrophoresis. All the fragments in the DNA Marker/Ladder are obtained by enzymatic digestion and purification. The bands are more clear during electrophoresis and the mass ratio between the bands is more accurate. The 750 bp fragment in the DL2000 Plus DNA Marker, the 1,000 bp fragment in the DL5000 DNA Marker and the 500 bp fragment in the 100 bp DNA Ladder are at a concentration of 100 ng/5 μl, which are bright bands; all the remaining fragments are at a concentration of 50 ng/5 μl.

Components

Components	250 μl (50 rxns, 5 μl/rxn)	500 μl (100 rxns, 5 μl/rxn)
DL2000 Plus DNA Marker	MD101-01	MD101-02
DL5000 DNA Marker	MD102-01	MD102-02
DL15000 DNA Marker	MD103-01	MD103-02
100 bp DNA Ladder	MD104-01	MD104-02

Storage

Store at -30 ~ -15℃ and transport at ≤0℃. Store at 2 ~ 8℃ after thawing and avoid repeated freezing and thawing.

Applications

It is applicable for agarose gel electrophoresis.

Notes

For research use only. Not for use in diagnostic procedures.

1. Please thaw and mix thoroughly before use.
2. The quality of the electrophoresis image is related to the agarose gel and the electrophoresis buffer. Please use high quality agarose, freshly prepared agarose gel, and replace the buffer in time to avoid affecting the electrophoresis results.
3. The concentration of the agarose gel is critical for the separation of DNA fragments. Higher concentration of agarose gel has better separation performance for short DNA fragments, while lower concentration of agarose gel facilitate separation of long DNA fragments. According to the actual situation, a suitable concentration of agarose gel can be selected for electrophoresis.
4. After the DNA fragments of equal mass are subjected to electrophoresis, the fragments with smaller molecular weight are lightly colored and the bands are thick; the fragments with larger molecular weight are colored deeply and the bands are thin. It is a normal phenomenon.
5. If EB is used as the nucleic acids stain dye, it should be noted that the electrical property of EB are opposite to that of DNA. During electrophoresis, EB and DNA migrate in opposite directions. If EB is added when preparing the agarose gel, the smaller molecular weight fragments in the DNA Marker/Ladder may be lightly colored and the bands may be blurred. It is a normal phenomenon.

Experiment Process

1. This product is ready-to-use. Load 5 μl DNA Marker/Ladder on gel. It is recomended to increase the loading amount if the wells are wide.
2. The recommended condition is 1 × TAE buffer, 0.8% - 2.0% agarose gel, and 4 - 10 V/cm between positive and negative electrodes.
3. This product contains two electrophoretic indicators (Xylene Cyanol and Bromophenol Blue). If 1% agarose gel is used, the Xylene Cyanol band is located at approximately 4 kb and the Bromophenol Blue band is located at approximately 400 bp.
4. Use UV transilluminator to detect DNA bands stained with nucleic acids stain dye.

   The figure below shows the electrophoresis images of DNA Marker/Ladder.