

DNA Marker 50-2,500 bp

Introduction

DNA Markers range in size from 50bp to 2,500 bp for rapid size estimation of PCR[†] products and restriction fragments. Loading 5 µl per lane yields approximately 50 ng of DNA per band. DNA can be visualized by ethidium bromide staining or kinased with radiolabeled ³²P for detection by autoradiography.

Contents

DNA Marker

250 µl-50 applications
Store at 4°C

Loading Buffer 6X (250 µl)

Contains: bromophenol blue
Store at 4°C or 25°C

Triple Dye Loading Buffer 6X (1.1 ml)

Contains: Orange G, bromophenol blue, xylene cyanol
Store at 4°C

Standard Procedure

1. Mix 5 µl of DNA marker and 1 µl of 6X loading buffer.
2. Mix 5 parts of your sample to 1 part of 6X loading buffer.
3. Load DNA markers and samples onto an agarose gel.
4. Electrophorese, stain, and photograph following your standard protocol.
5. Estimate the size of the sample DNA by reading its relative position to the closest marker.

NOTE: There is a higher concentration of dye material in the Triple Dye Loading Buffer. Therefore, we recommend it for use in large (40 cm) gels, run for extended times, (18 hours or more).

Procedure for 5' End Radiolabeling

NOTE: The marker can be labeled directly or for more efficient labeling, ethanol precipitate first.

Ethanol Precipitation

1. Remove a 100 µl aliquot of the DNA marker.
2. Add 10 µl of 3 M potassium acetate, pH 7.4.
3. Add 300 µl of absolute ethanol.
4. Incubate at -70°C for 30 minutes.
5. Microcentrifuge at 4°C for 10 minutes.
6. Redissolve the pellet in 100 µl of distilled water.
7. Quantitate by reading the absorption at 260 nm and label with [³²P]-ATP using T4 polynucleotide kinase and a standard protocol. See Sambrook, *et al.*, 5.68 (1989) or Ausubel, *et al.* (1987).

Product Safety:

For details regarding product safety, see Material Safety Data Sheet (MSDS); call (800) 638-8174 for extra copies of the MSDS. Emergency after hours, call collect (303) 595-9048.

Warranty:

Because of the numerous factors affecting results, Lonza DNA markers are sold with the understanding that purchasers will make their own tests to determine the suitability of these markers for their particular purposes. The use suggested by Lonza is presented only to assist our customers in exploring possible applications for this product. All information and data presented are believed to be accurate and reliable but are presented without the assumption of any liability by Lonza.

References

- Ausubel, F.M., Brent, R., Kingston, R.E., Moore, D.D., Seidman, J.G., Smith, J.A., and Struhl, K. **Current Protocols in Molecular Biology**, John Wiley & Sons, New York 1987.
- Sambrook, J., Fritsch, E.F., and Maniatis, T. **Molecular Cloning, A Laboratory Manual**, Second Edition, Cold Spring Harbor: Cold Spring Harbor Laboratories 1989

Ordering Information

Catalog No.	Description	Size
50631	DNA Marker 50-2,500 bp	50 Applications

Related Products

GelStar[®] Nucleic Acid Gel Stain
Latitude[®] HT Precast Agarose Gels
Latitude[®] Precast Agarose Midigels
Reliant[®] Gel System
SYBR[®] Green Gel Stains
SeaKem[®] LE Agarose
SeaPlaque[®] GTG[®] Agarose
SeaPlaque[®] Agarose
MDE[®] Gel Solution

For more information contact Technical Service at
(800) 521-0390 or visit our website at www.Lonza.com.

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†The PCR process may be covered by one or more third-party patents.

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