Lonza Rockland, Inc.
www.lonza.com
scientific.support@lonza.com
Scientific Support: 800-521-0390
Customer Service: 800-638-8174
Document # 18138-0820-06
Rockland, ME 04841 USA

DNA Marker 50-1,000 bp

Introduction

DNA Markers range in size from 50 bp to 1,000 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 ^{32}P for detection by autoradiography. Band sizes are 50 bp, 100 bp, 200 bo, 300 bp, 400 bp, 500 bp, 525 bp, 700 bp, and 1,000 bp.

Contents

DNA marker (250 µl – 50 applications)
Store at 4°C

6X loading buffer (250 µl)
Contains bromophenol blue
Store at 4°C or 25°C

NOTE: Mix small amounts as needed or mix a large amount, aliquot and store at 4°C.

Procedure – Ethidium Bromide Staining

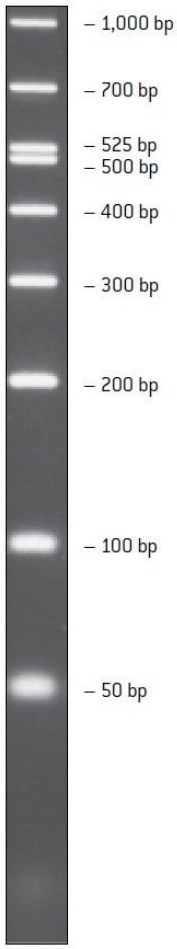
1. Mix 5 µl of DNA marker and 1 µl of 6X loading buffer. Each 5 µl provides 50 ng of DNA per band.
2. Mix 5 parts of your sample to 1 part of 6X loading buffer.
3. Load DNA markers and samples onto an agarose gel.
4. Electrophorese, stain and photograph following your standard protocol.
5. Estimate the size of the sample DNA by reading its relative position to the closest DNA marker.

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 3M 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 [γ-^{32} P]-ATP using T4 polynucleotide kinase and a standard protocol. See Sambrook. 5.68 (1989) or Ausubel, 3.4.3 (1987).



50 – 1,000 bp

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., Smith, J.A., Seidman, J.G., 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
50461	DNA Marker 50-1000 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

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

Manufactured for Lonza Rockland, Inc.

For Research Use Only.
Not For Use In Diagnostic Procedures.

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

GelStar and SeaKem are trademarks of DuPont Nutrition USA, Inc. All other trademarks herein are marks of the Lonza Group or its affiliates. GelStar is covered by U.S. patent 5,436,134. Other U.S.and foreign patent pending. SYBR is a trademark of Molecular Probes.