DNA Size Standards - Lambda Ladder

Catalog Number 170-3635

Contents  Lambda ladder DNA imbedded in 1% Bio-Rad's Low Melt Preparative Grade Agarose. The lambda ladder consists of successively larger concatemers of \( \lambda \) cl857 Sam7. These DNA size standards may be used as size markers for CHEF, FIGE, and other pulsed field electrophoresis gels (Figure 1).

Quantity  Five agarose inserts (25–40 lanes). The \( \lambda \) DNA concentration is approximately 15 µg per insert.

Size  The size of the lambda ladders starts at 48.5 kb and increases 48.5 kb with each successively larger band to approximately 1,000 kb.

Storage  Store at 4 °C upon receipt. Stable for 6 months at 4 °C. Use sterile instruments when removing samples from the tube. Introduction of nucleases will shorten the shelf life. The storage buffer is 10 mM Tris, pH 9.0, and 100 mM EDTA.

Use  Remove a sample insert from the packaging tube and place it on a smooth clean surface. Cut it to fit the sample wells using a razor blade or spatula. Each sample insert can be cut into 5-8 pieces that fit a 10 mm well. Place the cut piece of agarose into the sample well using a spatula, and gently press it to the bottom of the well. For best results, do not let the block exceed 80% of the height of the well. Fill each sample well with 0.8% Low Melt Preparative Grade Agarose to keep the sample in place and to remove air spaces. Allow the agarose to harden.
Fig. 1. Lambda ladders (concatemers of λ-cl857 Sam7). Electrophoresis was performed on the CHEF-DR® II pulsed field electrophoresis system at 200 V (6 V/cm) at 14 °C. Switch time was ramped from 50 seconds to 90 seconds for 24 hours. The gel was 1% Pulsed Field Certified Agarose (Catalog 162-0137) in 0.5x TBE.