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SIGMA

ProductInformation

F **X174 *Hae* III Digest**

Product No. **D 0672**

Storage temperature –20 °C

TECHNICAL BULLETIN

Product Description

ΦX174 phage genomic DNA is completely digested with the restriction endonuclease *Hae* III. The resulting mixture of fragments is suitable for use as a molecular weight marker for agarose or polyacrylamide gel electrophoresis.

Fragment Sizes [base pairs (bp)]

1,353	271
1,078	234
872	194
603	118
310	72
281	

Reagents

ΦX174 *Hae* III Digest is supplied as a solution in 10 mM Tris·HCl, pH 8.0, 1.0 mM EDTA.

Precautions and Disclaimer

ΦX174 *Hae* III Digest is for R&D use only, not for drug, household or other uses. Please consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

Store at less than –20 °C

Procedure

Suitability Assay

Loading Solution

Prepare ΦX174 Hae III digest for electrophoresis as follows:

5 µg ΦX174 Hae III Digest
10 µl gel loading solution (Product No. G 2526)
(0.05% w/v bromophenol blue, 40% w/v sucrose, 0.1 M EDTA, pH 8.0)
Q.S. to 50 µl total volume with water (Product No. W 4502).

Agarose Gel

Prepare 1.7% agarose (Product No. A 9539) gel for submarine-type minigel electrophoresis unit.

Electrophoresis

Load 0.25-1.0 µg/ well on the 1.7% agarose gel. Electrophoresis was performed in 1x TBE (0.089 M Tris-borate, pH 8.3, 0.01M EDTA). The gel was run with appropriate DNA fragment size standards at 70 volts for approximately 2 hours. After staining 15-20 minutes in 1 µg/ml ethidium bromide, 10 bands were clearly resolved and the pattern was consistent with the indicated fragment sizes.

Product Profile

Background from ethidium bromide staining can be reduced by destaining for 30-45 minutes in 1x electrophoresis buffer.

Better resolution of the smaller bands can be achieved using a 4% agarose gel (prepared using Wide Range Agarose, Product No. A 2790) at 60 V for 3-4 hours.

Reference

Daniels, D. L., et al., Complete Annotated Lambda Sequence in *Lambda-II*, Hendrix, R.W., et al. (Eds.) Appendix II (Cold Spring Harbor Laboratory Press, N.Y., 1983)

JWM 03/05