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Product Information

GenElute™–LPA

Catalog Number **56575**
Store at 2-8 °C

Product Description

GenElute LPA (Linear PolyAcrylamide) is an efficient neutral carrier for ethanol precipitation of picogram and greater quantities of DNA. The nucleic acid/LPA coprecipitate is collected by centrifugation. GenElute LPA offers several advantages over carriers, such as tRNA or glycogen, for recovering DNA prior to downstream applications. For example, tRNA interferes with DNA during phosphorylation with polynucleotide kinase, and glycogen competes with protein in DNA-protein interaction studies. In contrast, GenElute LPA is an inert, synthetic polymer and cannot be a source of biological contamination in the DNA sample.

The presence of LPA during ethanol precipitation results in complete recovery of fragments larger than 20 base pairs. The GenElute LPA procedure is simple. The nucleic acid/LPA coprecipitate is visible immediately upon addition of ethanol, and without low temperature incubations. The DNA is immediately suitable for downstream applications such as restriction digestion, ligation, sequencing, and PCR*.

Reagent

Supplied in nuclease-free water as a 25 mg/ml (25 µg/µL) solution.

Equipment and reagents required, but not provided

- Microcentrifuge
- Sodium acetate buffer solution, 3 M, pH 5.2, Catalog Number S7899
- Ethanol, 200 proof (absolute), Catalog Number E7023
- 1× Tris-EDTA buffer, prepared from Tris-EDTA buffer solution, 100×, Catalog Number T9285

or

- Water, Molecular Biology Reagent, Catalog Number W4502

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at 2-8 °C. Do Not Freeze.

Procedure

1. To a maximum of 400 µL of the DNA sample solution in a 1.5 ml microcentrifuge tube, add 0.1 x the sample volume of 3 M sodium acetate buffer, pH 5.2, 1 µL of GenElute LPA (25 µg/uL), and 2.5 x the sample volume of ethanol. Vortex the mixture.

   Example Reagent Volumes

DNA sample solution	3 M Sodium acetate buffer	Ethanol
200 µL	20 µL	500 µL

   Note: Precipitations are scalable to other sized tubes or multiwell plates. For best results, add 25 µg LPA (the solution can be diluted with water to allow convenient pipetting) to each DNA/sodium acetate solution.

2. Centrifuge the tube for 5 minutes in a microcentrifuge at maximum speed (12,000 x *g*). For other containers, such as plates, use the maximum *g*-force possible. A visible pellet will be formed. Carefully decant or remove the supernatant.

3. Wash the pellet with a minimum of 100 µL of 70% ethanol, centrifuge, and carefully remove or decant the supernatant. Allow the pellet to air dry for 5 minutes.

4. Dissolve the DNA/LPA coprecipitate in 1× TE buffer or water (pH>5). Buffer is recommended for long term storage.

References

1. Strause, F., and Varshavsky, A., *Cell*, **37**, 889-901 (1984).
2. Aruffo, A., and Seed, B., *Proc. Natl. Acad. Sci. USA*, **84**, 8573-8577 (1987).
3. Gaillard, C., and Strauss, F., *Nucl. Acid Res*. **18**, 378 (1990).

*The PCR process is covered by patents owned by Hoffman-LaRoche, Inc.

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