Product Information

Ribonucleic acid, transfer from baker’s yeast (S. cerevisiae)

Catalog Numbers R5636, R8508
Storage Temperature −20 °C

CAS RN: 9014-25-9
Synonyms: Transfer RNA, tRNA

Product Description
The transfer ribonucleic acids from baker’s yeast (S. cerevisiae) are suitable for use as carriers in nucleic acid purifications and precipitations. Catalog Number R5636 has been phenol-chloroform extracted and ethanol precipitated.

DNase, Nickase: none detected

Both products are provided as a solution at a concentration of ~10 mg/ml in 10 mM Tris HCl, pH 7.4, with 1 mM EDTA.

Note: Concentration is determined based on the assumption that a 40 µg/ml solution of tRNA has an absorbance of 1.0 at 260 nm.

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 −20 °C.

Procedure
Suitability For Use As Carrier – Lambda-Hind III digested DNA, at 0.1 µg/ml, 0.5 µg/ml, and 1.0 µg/ml, was extracted with phenol/chloroform and precipitated with ethanol as follows: 1 ml of phenol/chloroform (1:1) was added to 500 µl of DNA solutions (in 1.5 ml microcentrifuge tubes) at each concentration. The solutions were then vortexed briefly and centrifuged at 15,000 rpm for 1 minute in a microcentrifuge. 400 µl of the upper aqueous phase from each tube was placed in a microcentrifuge tube. To one set of tubes, 10 µl of the 10 µg/µl tRNA carrier solution were added and to another set no tRNA was added. Each tube was brought to approximately 0.27 M sodium acetate by the addition of 40 µl of a 3 M sodium acetate solution (pH 7.0). Then, 1 ml of 95% ethanol was added to each tube and the tubes were stored at −20 °C overnight. After centrifuging for 10 minutes in a microcentrifuge, the supernatant was aspirated and the pellets were air dried for 2 hours. The pellets were then dissolved in 50 µl of H2O and analyzed by agarose gel electrophoresis. Based on this analysis, the addition of carrier tRNA for coprecipitation improved the recovery of DNA approximately 10-fold.

References

KK,SM,PHC 09/09-1