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# 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 $H_2O$ 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**
1. Sambroook, J. and Russell, D.W., Molecular Cloning: A Laboratory Manual, 3rd edition, Cold Spring Harbor Laboratory Press, New York (2001), p. A8.13.

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