



Product Information

Ribonucleic acid, transfer, phenylalanine specific from brewer's yeast

Product Number **R 4018**
Storage Temperature 2-8 °C

Product Description

CAS Number: 63231-63-0
Molecular weight: approximately 25 kDa.
Abbreviation: tRNA

The sequence and structure of yeast phenylalanine specific tRNA have been described.¹⁻³

The phenylalanine acceptor activity of 100% pure tRNA is 1,800 pmoles per A₂₆₀ unit. Comparison of this number to lot-specific analysis may be used as an indication of product purity. Methods to further purify tRNA have been published.⁴⁻⁶

The assay for this product is based on a published method.⁵ The activity is measured using a crude preparation of phenylalanyl transfer ribonucleic acid synthetase. The phenylalanine specific tRNA is used as a substrate for the enzyme in the assay.

This product is not suitable for use as carrier tRNA to aid in the ethanol precipitation of very small amounts of DNA. Product Nos. R 8508 and R 5636 are recommended for use as carrier tRNA for DNA purification and precipitation.

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (1 mg/ml), yielding a clear, colorless solution.

References

1. RajBhandary, U. L., and Chang, S. H., Studies on polynucleotides. LXXXII. Yeast phenylalanine transfer ribonucleic acid: partial digestion with ribonuclease T-1 and derivation of the total primary structure. *J. Biol. Chem.*, **243(3)**, 598-608 (1968).
2. RajBhandary, U. L., et al., Studies on polynucleotides. LXXX. Yeast phenylalanine transfer ribonucleic acid: products obtained by degradation with ribonuclease T1. *J. Biol. Chem.*, **243(3)**, 584-591 (1968).
3. Kim, S. H., et al., Three-dimensional structure of yeast phenylalanine transfer RNA: folding of the polynucleotide chain. *Science*, **179(70)**, 285-288 (1973).
4. Litt, M., A simple procedure for the purification of yeast phenylalanine transfer RNA. *Biochem. Biophys. Res. Commun.*, **32(3)**, 507-511 (1968).
5. Schmidt, J., et al., Yeast phenylalanyl transfer ribonucleic acid synthetase. Purification, molecular weight, and subunit structure. *Biochemistry*, **10(17)**, 3264-3268 (1971).
6. Holmes, W. M., et al., Separation of transfer ribonucleic acid by Sepharose chromatography using reverse salt gradients. *Proc. Nat. Acad. Sci. USA*, **72(3)**, 1068-1071 (1975).

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