



## Yeast tRNA, Transfer RNA BR Grade

Product Number: TRN001

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### Shipping and Storage

1. Store at 2-8°C.
2. Thawing instructions: Thaw completely below 37 °C, vortex for a few seconds after melting, and then place on ice. When necessary, package RNA to minimize freeze-thaw cycles (≤ 5).

### Components

Yeast tRNA, Transfer RNA BR Grade	100mg	1g	5g	10g
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### Description

This product is sourced from beer yeast. It can serve as a co precipitant for nucleic acid precipitation, as well as a blocking agent for RNA probe hybridization reactions (such as in situ hybridization, Northern and spot hybridization, etc.). However, it is not recommended to precipitate nucleic acid from yeast tRNA for subsequent polynucleotide kinase or terminal transferase reactions, as yeast tRNA competes with the reaction substrate for enzyme activity. Although it cannot be used for reactions inhibited by exogenous RNA, as a co precipitate, it not only has high quality but also low price.

TRNA is a type of small molecule ribonucleic acid that is a specific transport amino acid in protein biosynthesis and ensures accurate transmission of genetic information from nucleic acid to protein. Each amino acid has one or more corresponding tRNAs, and each cell has approximately 40-70 different tRNAs composed of 72-93 nucleotides, of which 5% -20% are rare bases, with an average relative molecular weight of 25000 and a sedimentation coefficient of about 4S. The primary structure of different tRNAs is different, but they share common characteristics of the secondary structure of clover. The amino acid arm 3'-C-C-A-OH is a binding site for amino acids, and the acyl group of the amino acid attaches to the 3' hydroxyl group of the corresponding tRNA 3' terminal adenosine under the catalysis of a specific amino acid acyl tRNA synthase; The three consecutive nucleotides in the anti codon ring complement the codon of mRNA on the ribosome, allowing amino acids to accurately position and synthesize polypeptide chains. Through this correspondence between the code anti code amino acids, tRNA plays an important binding role, ensuring accurate information transmission from nucleic acid to protein.

Appearance	White to grayish brown powder.
Electrophoresis experiment	Qualified
Content	15-20 A260 units/mg
Non specific endonuclease activity residue detection	Qualified
Detection of residual exonuclease activity	Qualified
Detection of residual RNase activity	Qualified

### Application

Nucleic acid precipitation: Adjust the concentration of monovalent cations in the solution (e.g. 0.5 M NH<sub>4</sub>OAc or 0.25 M NaCl or 0.3 M NaOAc). Add yeast tRNA to the final concentration of 10-20µg/mL. Mix well and then add 2 times the volume of ethanol. Freeze at -20°C or lower for at least 15 minutes. ≥ Centrifuge 10000×g for at least 15 minutes. Carefully remove the supernatant and resuspend the precipitate in an appropriate buffer.

**Note: When yeast tRNA was used as a carrier and isopropanol was used instead of ethanol, a small amount of nucleic acid did not precipitate quantitatively. For ethanol precipitation of terminal labeled oligonucleotides (such as 35 mers), linear acrylamide or glycogen are more effective co precipitants than yeast tRNA.**

### Note

RNA is highly sensitive to the degradation of exogenous ribonucleases introduced during the processing. Please wear gloves

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when using this product. Use RNase free reagents, test tubes, and self sealing pipette tips.