








**PRODUCT HIGHLIGHT**

Worthington Ribonucleases A & B are prepared from bovine pancreas and are offered in several grades to suit various applications. Animal Free microbial and recombinant RNases A, T1 and T2 are also prepared from cultures devoid of animal materials to avoid potential pathogens associated with animal sourced materials. When Ribonuclease A is used to remove RNA during DNA isolation, the enzyme must be free of deoxyribonuclease activity to prevent damage to the DNA. Where other enzymes are used or where the goal is recovery of intact proteins, proteolysis must be prevented. These requirements are satisfied by our Molecular Biology Grade Ribonuclease (Code: RPDF). This and other ribonuclease preparations made by Worthington are described below.

Description	Activity	Code	Catalog No.	Size
<b>RNase A, DNase and Protease Free</b> Molecular Biology Grade. Supplied as a solution containing approximately 5mg/ml in 50% glycerol. Prepared specifically for use in purifying DNA plasmids. Each lot is assayed to be free of DNase and protease. Store at 2 - 8°C. Storage at -20°C is acceptable.	≥ 2,000 units per mg protein	<b>RPDF</b>	LS002131	1 mg
			LS002132	5 mg
			LS002130	Bulk
<b>Ribonuclease A, Purified</b> A highly purified, lyophilized preparation which may contain aggregates as a result of lyophilization but which exhibits same specific activity as RASE (below). Store at 2 - 8°C. PROTECT FROM MOISTURE.	≥ 3,000 units per mg dry weight	<b>RAF</b>	LS005649	25 mg
			LS005650	100 mg
			LS005655	Bulk
<b>Ribonuclease A, Purified Solution</b> Monomeric form, purified by method used for RAF (above) and further processed to remove aggregates. Available as a solution in 0.1 M phosphate buffer, pH 7.4 containing 0.1% v/v phenol as a preservative. Store at -20°C. REQUIRES SPECIAL SHIPPING. DRY ICE.	≥ 3,000 units per mg protein	<b>RASE</b>	LS005677	25 mg
			LS005679	100 mg
			LS005681	Bulk
<b>Ribonuclease A</b> Chromatographically purified. Lyophilized. Store at 2 - 8°C. PROTECT FROM MOISTURE.	≥ 2,500 units per mg dry weight	<b>R</b>	LS003431	200 mg
			LS003433	1 gm
			LS003435	Bulk
<b>Ribonuclease B</b> A partially purified preparation containing a mixture of RNase A and RNase B. A soluble, dialyzed lyophilized powder. Store at 2 - 8°C.	≥ 1,000 units per mg dry weight	<b>RB</b>	LS005710	100 mg
			LS005715	Bulk

## Ribonuclease A, T1 and T2, Animal Free

Description	Activity	Code	Catalog No.	Size
<p><b>Ribonuclease A, Recombinant DNase and Protease Free</b>                      Recombinant Bovine pancreatic Ribonuclease A produced in <i>Pichia pastoris</i>. Chromatographically purified, free of animal derived components, DNases and Proteases. Supplied as a lyophilized powder. Store at 2 - 8°C.</p>	≥ 3,000 units per mg dry weight	RRA1 	LS01506 LS01508 LS01510	10 ku 25 ku Bulk
<p><b>Ribonuclease A, Recombinant Bioprocess Grade</b>                      Recombinant Bovine pancreatic Ribonuclease A produced in <i>Pichia pastoris</i>, Animal Free/AF, Bioprocess grade. For the removal of RNA in bioprocessing applications. May contain DNases and Proteases. Supplied as a lyophilized powder. Store at 2 - 8°C.</p>	≥ 175 units per mg dry weight	RRA2 	LS01512 LS01514 LS01516	100 mg 1 gm Bulk
<p><b>Ribonuclease T1, Chromatographically Purified <i>Aspergillus oryzae</i></b>                      Highly purified, microbial (non-mamalian). RNase prepared with non-animal components. Supplied as a solution in 2.8M ammonium sulfate. Supplied as a dialyzed, lyophilized powder. Store at 2 - 8°C.                      REQUIRES SPECIAL SHIPPING. ICE PACK.</p>	≥ 300,000 units per mg protein	RT1S 	LS01485 LS01487 LS01488	100 ku 500 ku Bulk
<p><b>Ribonuclease T1, Chromatographically Purified, Lyophilized</b>                      Highly purified, microbial (non-mamalian). RNase prepared with non-animal components. Supplied as a dialyzed, lyophilized powder. Store at 2 - 8°C.</p>	≥ 300,000 units per mg protein	RT1L 	LS01490 LS01492 LS01494	500 ku 2500 ku Bulk
<p><b>Ribonuclease T2, Recombinant DNase and Protease Free</b>                      Highly purified recombinant <i>Aspergillus oryzae</i> Ribonuclease T2 produced in <i>Pichia pastoris</i>. Free of animal derived components, DNases and protease. Supplied as a lyophilized powder. Store at 2-8°C.</p>	≥ 10,000 units per mg protein	RT2R 	LS01501 LS01502 LS01505	50 ku 250 ku Bulk

### Unit Definitions:

#### Ribonuclease A/Ribonuclease B:

1 unit causes an increase in absorbance of 1.0 at 260 nm at 37°C and pH 5.0 when yeast ribosomal RNA is hydrolyzed to acid soluble oligonucleotides. **One Kunitz unit equals 50 Worthington units.**

#### Ribonuclease T1:

One unit releases the equivalent of one A<sub>260</sub> of acid-soluble products at 37°C, pH 7.5, from yeast RNA in 15 minutes.

#### Ribonuclease T2:

One unit will cause an increase in absorbance of 1.0 at 260 nm at 37°C, pH 4.5 in 15 minutes.

### Stability and Storage:

**Product Code: RPDF** is stable at least 2 years at 2 - 8°C or -20°C. **Product Code: RASE** is stable 2-3 years at -20°C. **Product Code: RT1L** is stable 12-18 months at 2-8°C. **Product Codes: RAF, R, RB, RRA1, RRA2, RT1S and RT2R** are stable 2-3 years at 2 - 8°C.

**References:** 1. Kalnitsky, G., Hummel, J.P., and Dierks, C.: Some Factors Which Affect the Enzymatic Digestion of Ribonucleic Acid. *J. Biol. Chem.*, 234, 1512 (1959).

**For current citations in real-time, go to the online product listings and reference the Bioz Stars in the yellow highlighted area:**

<https://www.Worthington-Biochem.com/products>

### Related Products

Albumin, Nuclease-Free • Deoxyribonuclease I • Deoxyribonucleic Acid and Related Products • Deoxyribonuclease, Recombinant • Histones  
 Lysozyme • Nuclease, Micrococcal • Nuclease, S1 • Phosphatase, Alkaline • Phosphodiesterase I • Phosphodiesterase II • Proteinase K  
 Reverse Transcriptase, Recombinant HIV • Ribonucleic Acid

For Product Catalog, Tissue Dissociation Guide and Enzyme Manual, go to: [Worthington-Biochem.com](http://Worthington-Biochem.com)