**DATA SHEET**

**DNase I (RNase-Free)**
**Deoxyribonuclease I, Ribonuclease & Protease Free**

| Catalog No. | Quantity |
|---|---|
| 15601-100 | 2500 unit |

**Description:**
Endonuclease which digests dsDNA by hydrolysis of deoxyribonucleotide linkages, producing 3'-hydroxyl oligonucleotides.
**Source:** Bovine Pancreas
**Form:** Lyophilized in vials and chromatographically purified to remove RNase and protease.
**DNase Activity:** ≥2,000 units/mg dry weight
**Protease:** None detected
**RNase:** None detected
**Unit Definition:** 1 unit causes an increase in absorbance at 260nm of 0.001 per minute per ml at 25°C when acting upon highly polymerized DNA at pH 5.0.
**Note:** 0.005 Kunitz units digests 1ug DNA in 10 minutes at 37°C, 50mM Tris, 1mM Ca+2, 1mM Mg+2 in a 50ul reaction.
**Assay Method:** Based on the Kunitz method where DNase will depolymerize DNA; 0.005 Kunitz units digests 1ug of lambda DNA in 10 minutes at 37°C in 50mM Tris, 1mM Ca+2 and 1mM Mg+2, pH 7.8 in a 50ul reaction.
This product is for research purposes only. Not for diagnostic use.

**Storage Conditions**
Store at 2-8°C lyophilized for up to 2 years.
Recommended DNase I Solution Preparation and Storage
Prepare DNase I solution by adding 500 µl of sterile water to the DNase I (RNase-Free) lyophilized powder and mix gently. Aliquotting the DNase I stock enzyme is recommended to avoid repeated freeze/thaw cycles. The DNase I stock enzyme can be freeze/thawed up to three times without loss of activity.

**Storage**
Remove DNase I (RNase-Free) lyophilized powder and store at 4ºC. Store resuspensed DNase I solution at -20°C (DNase I is sensitive to physical denaturation. Do not vortex the resuspended DNase I solution). Store the 10x DNase I Buffer at room temperature (15-30ºC) or 4ºC.

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Gentaur Molecular Products
Voortstraat 49
1910 Kampenhout, Belgium

**DNase I Digestion Protocol for Purified RNA in Solution**

**This protocol is for the removal of genomic DNA from RNA samples. The reaction may be scaled up or down according to the volume of RNA in solution.**

**For a 100 µl reaction, prepare as follows:**

**RNA sample: ≤88 µl**

**10X buffer: 10 µl**

**DNase I stock enzyme: 2 µl**

**Sterile water: bring the volume up to 100 µl**

**Mix and incubate at room temperature (22-25$^{0}$C) for 10 minutes.**

**Inactivate DNase I by adding EDTA to a final concentration of 5 mM to chelate the divalent cations then heat to 75$^{0}$C for 5 minutes.**

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