For general laboratory use. Not for use in diagnostic procedures. FOR *IN VITRO* USE ONLY.

# DNase I

(*Deoxyribonuclease* I, E.C. 3.1.21.1)
From bovine pancreas Lyophilisate, sterile

**Cat. No. 11 284 932 001**
100 mg

**Version July 2005**
Store at +2 to +8°C

## Product overview

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| **Commercial availability** | Lyophilized; sterile |
| **Preparation** | DNase I is prepared from bovine pancreas. |
| **Specific activity** | > 2000 U/mg (25°C, DNA as substrate).<br>One unit is the enzyme activity which yields an increase in absorbance of 0.001 per min under the assay conditions (1). |
| **Inhibitors** | EDTA, EGTA, SDS. |
| **Activators** | Bivalent metal ions ($Ca^{2+}$, $Mg^{2+}$ ). |
| **Reconstitution** | Reconstitute the lyophylisate in sterile double dist. water (10 mg/ml); further dilution with PBS (phosphate buffered saline), HBSS or medium. |
| **Working concentration** | 0.01–1 mg/ml.<br>***Note:*** For each cell type the working concentration has to be determined individually. For optimal activity the enzyme needs 5 mM $Mg^{2+}$ . |
| **Properties** | DNase I from bovine pancreas, a glycoprotein with $M_r$ 37 000, is a doublestrand specific endonuclease, that requires bivalent cations for maximal activity. |
| **General** | During tissue disaggregation an unwanted cell clumping can occur making a dispersion of single cells difficult (2–21).<br>Since dissociation of tissue and isolation of single cells always is accompanied by rupture and lysis of some cells DNA is releases from these cells into the culture and dissociation medium respectively. Such a DNA content within the medium is described to be responsible for unwanted cell clumping during tissue disaggregation procedures (2–20). This effect can be avoided by adding desoxyribonuclease (DNase) to the dissociation medium and has been described for a variety of different cell and tissue types . |
| **Application** | DNase I can be used to prevent unwanted cell clumping during tissue disaggregation procedures and during cell culture being a constituent of the medium and has been proved not to be cytotoxic in concentration up to 1 mg/ml (18).<br>DNase I is often used in conjunction with other enzymes, *e.g.*, collagenase*or trypsin*. |
| **Storage and stability** | Stable at +2 to +8°C until the expiration date printed on the label.<br>The reconstituted solution is stable at −15 to −25°C.<br>***Note:*** It is recommended to prepare appropriate aliquots and to avoid repeated freezing and thawing. |

** available from Roche Applied Science*

## References


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## Ordering Information

| Product | Pack size | Cat. No |
|---|---|---|
| DNase I, recombinant, gradel | 2 × 10,000 U | 04 536 282 001 |

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