

Datasheet

DNase I**Molecular Biology reagent**

Product	Description	Catalogue-No.	Size
DNase I	Molecular Biology reagent	P60-37780100	100 mg

Product description

DNase I cleaves single-stranded and double-stranded DNA (including chromatin) at neutral pH (optimum is a pH of 7.8), producing polynucleotides with a 5'-phosphate and a free hydroxyl-group in 3' position. The activity and specificity (single-strand versus double-strand) of DNase I is determined by the surrounding ions. Maximum activation requires the presence of Mg²⁺ and Ca²⁺ ions. Magnesium ions mainly yield in the generation of single-strand nicks, while the presence of Mn²⁺ ions causes double-strand breaks. DNase I is inhibited by chelators such as citrate, EDTA and SDS or β-mercaptoethanol.

Storage conditions

Storage: - 20 °C
Stability: see Lot-specific certificate of analysis
Size: 100 mg, other sizes on request

Application

Dissolve DNase I at 2 mg/ml in 0.15 M sodium chloride or reaction buffer (e. g. 50 mM Tris-HCl, pH 7.5; 50 µg/ml BSA; 10 mM MgCl₂ or 10 mM MnCl₂).

Heat inactivation: Heat to 99 °C for 10 min

Preparation of RNase-free DNase I:

Dissolve 1 mg/ml DNase I in 0.1 M iodoacetic acid plus 0.15 M sodium acetate at a final pH of 5.3. Heat to 55°C for 40 minutes, then cool down the solution. Add 1 M CaCl₂ to a final concentration of 5 mM. Store in small aliquots at -20°C.

Composition

DNase I is extracted from bovine pancreas and purified using multiple precipitation, fractionation, chromatography, and filtration steps. Due to the highly optimized purification processes, a product of highest quality, stability and batch-to-batch consistency is provided. DNase I is delivered as a salt-free, freeze-dried powder.

Activity (Kunitz): > 1000 U /mg

Unit Definition: The amount of enzyme causing an increase in extinction at 260 nm of 0.001 per minute at 25°C and pH 5.0

Technical support

For technical support, questions or remarks please contact your local PAN-Biotech partner or the technical department of PAN-Biotech via email (info@pan-biotech.com) or phone +49-8543-601630.

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