

# Active Recombinant Bovine DNase I

**Cat. No.** DNase I-04B    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Product Overview</b> | Recombinant DNase I is derived from bovine pancreas and recombinantly expressed in <i>Pichia pastoris</i> . The RNase activity has been removed during the purification process. RNase Activity: Negative Residual Host Cell Protein: < 50 ppm Residual Host Cell DNA: < 100 pg/mg pH: 7.8-8.2                                                                                                                     |
| <b>Species</b>          | Bovine                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>           | Pichia                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>      | DNase I is a non-specific endonuclease that can degrade double-stranded and single-stranded DNA as well as chromosomes. It acts by hydrolyzing phosphodiester bonds to produce mononucleotides and oligonucleotides with 5'-phosphate groups and 3'-hydroxyl groups. The activity of this enzyme requires the participation of Mg <sup>2+</sup> or Ca <sup>2+</sup> ions, and the optimal pH is approximately 7.8. |
| <b>Purity</b>           | ≥ 95% by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Bio-activity</b>     | ≥ 2 U/μL                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Advantages</b>       | 1. RNase-free. 2. It has high purity and can be directly used for amplification reactions. 3. Its performance is comparable to that of well-known brand.                                                                                                                                                                                                                                                           |
| <b>Unit definition</b>  | 1 U is defined as the amount of enzyme required to completely degrade 1 μg of plasmid DNA at 37 centigrade within 10 minutes.                                                                                                                                                                                                                                                                                      |

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| <b>Endotoxin</b>    | < 10 EU/mg                                                                                                                                                                                                                                                                                                                                        |
| <b>Usage</b>        | RNA: 10 µg 10× DNase I Reaction Buffer: 10 µL Recombinant DNase I: 2 U Water:<br>Up to 100 µL Incubate at 37 centigrade for 10 minutes. After the reaction is<br>completed, add EDTA to a final concentration of 5 mM and incubate at 75 centigrade<br>for 10 minutes to inactivate DNase I.                                                      |
| <b>Applications</b> | 1. Removal of template DNA after in vitro transcription 2. Removal of DNA<br>contamination in RNA                                                                                                                                                                                                                                                 |
| <b>Note</b>         | 1. Try to avoid freeze-thaw cycles of this product after receipt; 2. Please wear lab coat<br>and disposable gloves when using; 3. Inactivation: Add EDTA to a final concentration<br>of 5 mM and heat at 75 centigrade for 10 minutes to inactivate DNase I; 4. This<br>product should not be used directly for clinical diagnosis and treatment. |
| <b>Stability</b>    | This product should be stored at -20 centigrade and can be stored for at least 24<br>months.                                                                                                                                                                                                                                                      |
| <b>Storage</b>      | Store at -20 centigrade.                                                                                                                                                                                                                                                                                                                          |
| <b>Shipping</b>     | Dry Ice                                                                                                                                                                                                                                                                                                                                           |