

Product Information

Source: Recombinant secreted endonuclease enzyme from *E.coli*.

Catalog number: OSB-DRNase[®]

Storage conditions: -20°C

Product code	Available size (U)	Volume
OSB-DRNase [®] -250K	250 KU	1ml
OSB-DRNase [®] -1M	1.0 MU	4ml
OSB-DRNase [®] -2.5M	2.5 MU	10ml
OSB-DRNase [®] -5.0M	5.0 MU	20ml
OSB-DRNase [®] -20M	10.0 MU	40ml

DRNase[®] is a secreted recombinant endonuclease enzyme from *Serratia marcescens* and produced by a microbial fermentation process using *E.coli* as the host and BacSec[®] Technology for secretion into media. The *E.coli* strain used for the protein expression is a genetically modified organism categorized under Biosafety level 1 (BSL-1) and has minimal endotoxins in final product. No animal products were employed during the preparation of product.

Storage buffer

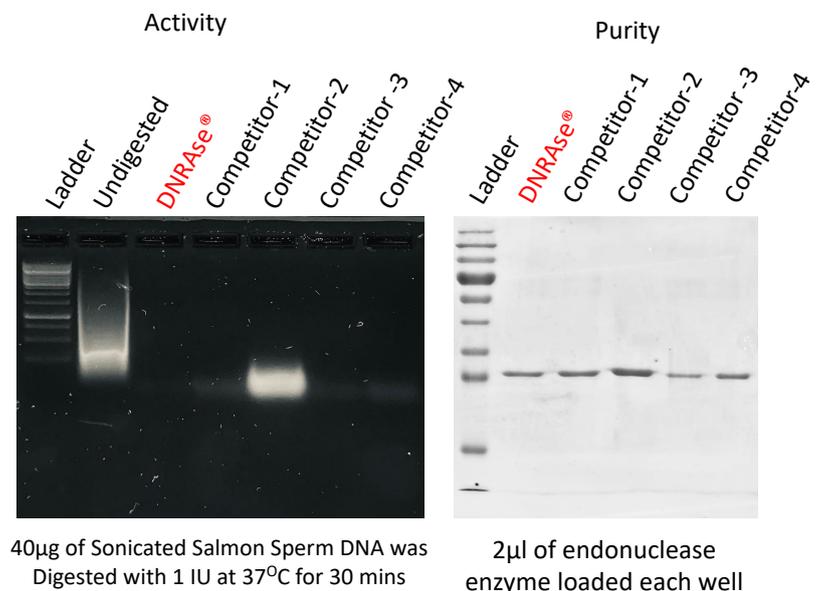
25mM Tris, 20mM NaCl, 2mM MgCl₂, pH 8.0 and 50% glycerol.

Enzyme Features

DRNase[®] enzyme is an endonuclease and the best choice to reduce the cell lysate viscosity not only in a research laboratory setting but also at a high-scale production of biopharmaceuticals.

The enzyme hydrolyzes phosphodiester bonds of oligonucleotides, genomic DNA, RNA, linear, supercoiled, and circular plasmid DNA into very small fragments that are undetectable on an Agarose gel.

Unit Definition: One unit of DRNase[®] Nuclease is defined as the amount of enzyme that causes an ΔA_{260} of 1.0 in 30 minutes, which corresponds to complete digestion of 40 μ g of DNA.



<i>Molecular weight</i>	<i>~30 kDa</i>
<i>Optimum pH range</i>	<i>7.0-8.5</i>
<i>Optimum temperature</i>	<i>35-37°C</i>
<i>Calculated Iso-electric point</i>	<i>6.85</i>
<i>Co-factor</i>	<i>Mg⁺²</i>
<i>Recommended storage</i>	<i>-20°C</i>

Applications

DRNase® endonuclease can reduce the DNA and RNA levels very efficiently in cell lysates. The enzyme can be used industrial vaccine development procedures, in reduction of nucleic acid contaminantation is a regulatory mandate. The enzyme can efficiently reduce cell viscosity when working with cell lysates on a research scale or at a fermentation-based industrial production leading to reproducible clean results.

Operating conditions

The enzyme activity was shown to be best at 35-37°C, however, the enzyme was found to be functional at different temperatures with various activity. A pH range of 7.0-8.5 is recommended.

Mg⁺² acts as a co-factor and hence quenching reagents such as EDTA may severely compromise the activity of the enzyme.

Stability and storage conditions

DRNase® enzyme is stable at -20°C for two years. Avoid frequent freeze-thawing of the enzyme.

Note: Avoid freezing the enzyme at -80°C as it will reduce the activity rapidly.

DRNase® produced in E.coli in regulatory compliant cGMP manufacturing facility.

Sales & Business development

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