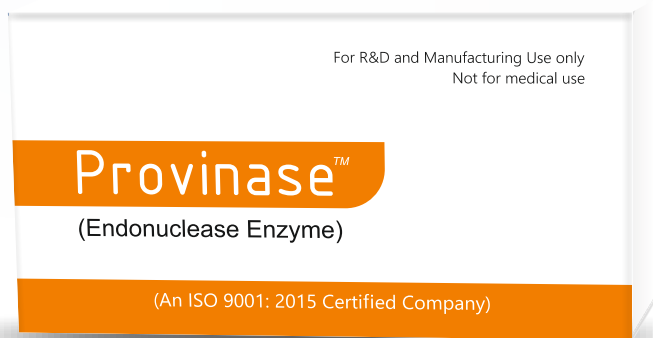
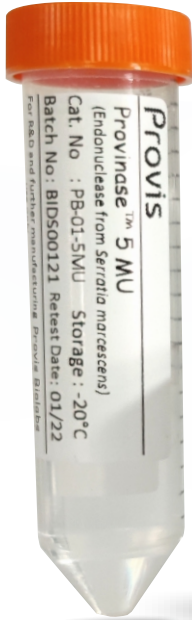




Provis



Provinase™

(Endonuclease from *Serratia marcescens*)

For R&D and
bio-manufacturing
applications

Distributed by:
Ilex Life Sciences LLC
Candler, NC, USA
Tel.: (828) 531-9949
Email: info@ilexlife.com
Web: <https://ilexlife.com/>

ILEX
LIFE SCIENCES

About Provinase™

Provinase™ is an endonuclease enzyme from *Serratia marcescens* expressed in *E. coli*. Provinase™ is a dimer of 30kDa sub-unit with two disulphide bonds and it attacks and digests all forms of nucleic acids to 3 to 5 bases in length. Provinase™ is effective over wide operating conditions of pH, buffering conditions and media components employed in biotechnology processes.

Enzyme Characteristics

Provinase™ is an endonuclease enzyme that hydrolyses double-stranded and single-stranded DNA and RNA with high specificity.

- Molecular weight: 30 kDa
- Optimum pH: 8.0 - 9.0
- Temperature optimum: 37 °C
- Cofactor: Mg²⁺

Applications

Provinase™ used in nucleic acid removal applications in manufacturing of biotechnological products such as:

- Viruses and virus like particles in vaccines.
- Viral vectors and lentivirus for gene/cell therapies and oncolytic vaccines.
- Viscosity reduction in cell lysates.
- Sample preparation in electrophoretic and chromatography techniques.
- Prevention of cell clumping.

Provinase™ is tested in cell cultures (HEK293) for removal of nucleic acids. Recommended to use in the range of 10 to 50 U/ml of cell culture harvest based on cell density and viscosity.

Provinase™ is being extensively used by leading Covid 19 vaccine manufacturers

Advantages of Provinase™

- High purity ($\geq 99\%$).
- High endonuclease activity (>250 U/ μ l).
- No detectable protease activity.
- Endotoxin, microbial and mycoplasma tested.
- Compendial (such as USP) excipients.
- TSE/BSE and animal component-free raw materials.
- Manufacturing process is free from antibiotics, melamine, casein, gluten and allergens.
- Manufactured in ISO 9001:2015 and GMP certified facility with ISO 7 and ISO 8 clean rooms following ICH Q7 principles.
- Halal and Kosher certified manufacturing process.
- Extensive product characterization and documentation.
- Affordable pricing and faster delivery (2 to 3 weeks).
- Provinase™ shipments shall be done in controlled condition (-20°C) with temperature loggers.

Manufacturing of Provinase™

Provinase™ has been developed for use in cGMP manufacturing of bio-products. Provinase™ is manufactured in ISO 9001:2015 and GMP certified facility under ISO classified environment by following ICH Q7 GMP principles. Proprietary manufacturing process using widely accepted *E. coli* as production host.

Product Specification

Provinase™ is formulated in endotoxin free stabilizing glycerol solution with the following specification: 50% Glycerol v/v, 20mM Tris-HCl, pH 8.2, 20mM NaCl and 2mM MgCl₂. Each batch is tested and released as per specifications to achieve consistent product quality.

Appearance

Clear and transparent solution

Specific activity

>250 U/ μ l

Purity by SDS-PAGE (Silver)

$\geq 99\%$

Protease activity

No protease activity should be detectable

Endotoxin

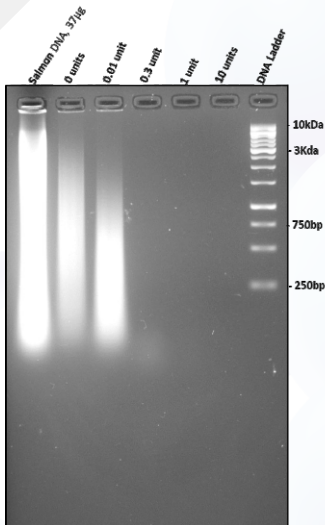
< 0.25 EU/1kU

Total microbial count

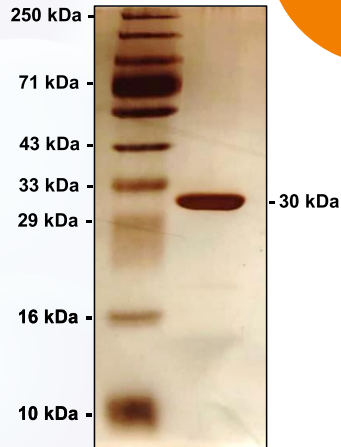
TAMC: <5 CFU/ml TYMC: <5 CFU/ml

Mycoplasma

Absent



0.3 Units (U) of Provinase™ digests 37µg of DNA



Provinase™ is >99% pure by SDS-PAGE (Silver staining)

Stability and Storage

Provinase™ is stable at a long term storage temperature of -20 °C for at least 18 months. Not recommended to store Provinase™ below -25 °C. Avoid repeated freeze-thaws beyond 4 times and store away from light for optimal performance.

Removal and detection of Provinase™

Provinase™ can be removed by commonly employed purification techniques such as tangential flow filtration, affinity chromatography and ion exchange chromatography.

Residual Provinase™ can be detected using EndonucleaseGTP® kit from Cygnus Technologies, USA.

Packaging and handling

Provinase™ is filled in sterile and non-pyrogenic, USP Class VI-compliant single use containers. Provinase™ is a protein product prone to microbial contamination and hence, should always be handled under aseptic conditions.

Provinase™ is supplied in in four different pack sizes:

S.No.	Product	Package Size	Order No.
1	Provinase™	100,000 U/vial	PB-01-100KU
2	Provinase™	150,000 U/vial	PB-01-150KU
3	Provinase™	1,000,000 U/vial	PB-01-1MU
4	Provinase™	5,000,000 U/vial	PB-01-5MU

Provinase™ shipments shall be done in controlled condition (-20° C) with temperature loggers.

To know more about Provinase™, for samples, for technical document and to order email us at: contact@provisbiolabs.com

About Provis Biolabs

ProvisBiolabs Pvt Ltd is a Hyderabad, India based Biotechnology Company founded in the year 2019 to develop, manufacture and market complex biotechnology products through sustainable means. Provis is founded by a team of professionals with over 35 years of combined expertise in biotechnology industry with global experience. Provis has its R&D lab at Aspire-BioNest Incubation Centre, University of Hyderabad and ISO 9001:2015 and GMP certified manufacturing facility at Balanagar, Hyderabad. Provis has other products such as Trypsin, Carboxypeptidase B and Recombinant human albumin.