

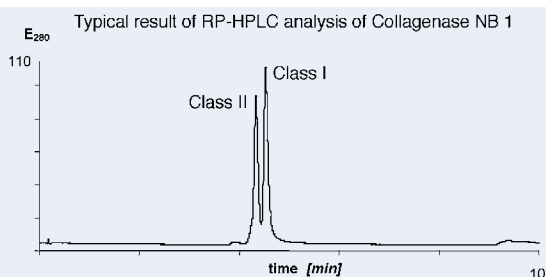
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Specials

Collagenase NB for Tissue Dissociation

Collagenase Qualities

Isolation of Pancreatic Islets

Chromatographically highly purified **Collagenase NB 1 Premium Grade** with very low levels of secondary proteolytic activities and endotoxins guarantee high yields and excellent cell viability. **Neutral Protease NB** is an essential additive, and is provided separately allowing individual dosage and high stability of the enzymes.



Isolation of Sensitive Cells

Purified **Collagenase NB 8 Broad Range** with increased collagenase activity and reduced levels of other proteases and bacterial endotoxins.

Isolation of Various Cell Types

Optimal tissue dissociation can be achieved using collagenase with a balanced ratio of other proteolytic activities:

- **Collagenase NB 4 Standard Grade**
- **Collagenase NB 4G Proved Grade**
- **Collagenase NB 5 Sterile Grade**

Mild and effective – Collagenase NB 4 Standard Grade for optimal isolation of a broad variety of cells.

Function tested – Collagenase NB 4G Proved Grade is especially suitable for isolation of adipocytes, fibroblasts, hepatocytes, frog oocytes, chondrocytes and stem cells.

Ready to use – Collagenase NB 5 Sterile Grade is produced under aseptic conditions according to the European Pharmacopoeia.

Good Manufacturing Practice for Cell Isolation

Production of cells by tissue dissociation as well as tissue engineering for transplantation into humans require quality standards according to cGMP guidelines:

- **Collagenase NB 1 GMP Grade**
- **Neutral Protease NB GMP Grade**
- **Collagenase NB 6 GMP Grade**

Such enzymes are regarded to be critical raw materials and thus manufactured in compliance with the EU-Guide to current Good Manufacturing Practice “cGMP for active pharmaceutical ingredients”. Moreover the production fulfills the requirements of TSE (transmissible spongiform encephalopathy) guidelines according to the European Pharmacopoeia.

For incoming goods inspection according to GMP, **Reference Collagenases** are available.



All **Collagenase NB qualities** are manufactured at the pharmaceutical plant of Nordmark Arzneimittel GmbH & Co. KG in Uetersen, Germany, the world's largest manufacturer of collagenase.

TSE safety of the fermentation product has been certified by the European authorities, EDQM and by supplier's certificate of origin. Application of pharmaceutical manufacturing standards guarantees a high quality of the products with a reliable lot-to-lot consistency.

Ordering Information

Collagenase	Properties	Application	Cat.-No.**	Pack Size**
Collagenase NB 1 Premium Grade from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Chromatographically highly purified Contains class I and class II collagenases PZ activity* ≥ 3.0 U/mg lyophilisate Largely free of clostripain, trypsin-like proteases and neutral protease Endotoxins ≤ 10 EU/ mg lyophilisate 	<ul style="list-style-type: none"> Isolation of pancreatic islets Use in combination with Neutral Protease NB Collagen characterization 	17455.03	$\geq 2,000$ PZ U/Vial
Collagenase NB 1 GMP Grade from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Enzymatic properties see Collagenase NB 1 Premium Grade Manufactured according to international cGMP guidelines 	<ul style="list-style-type: none"> Isolation of pancreatic islets for transplantation into humans Use in combination with Neutral Protease NB GMP Grade 	17452.01	$\geq 2,000$ PZ U/Vial
Collagenase NB 4 Standard Grade from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Contains class I and class II collagenases and a balanced ratio of proteolytic activities PZ activity* ≥ 0.1 U/mg lyophilisate 	<ul style="list-style-type: none"> Isolation of various cell types including neuronal and endothelial cells, chondrocytes, adipocytes, epithelial cells, stem cells, gangliocytes and periodontal cells 	17454.02 17454.01	500 mg 1 g
Collagenase NB 4G Proved Grade from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Contains class I and class II collagenases as well as a balanced mix of neutral protease, clostripain and tryptic activities PZ activity* ≥ 0.18 U/mg lyophilisate Function tested for cell isolation 	<ul style="list-style-type: none"> Isolation of various cell types - especially adipocytes, fibroblasts, hepatocytes, chondrocytes, stem cells, frog oocytes, mastocytes and tumor cells 	17465.01 17465.02	500 mg 1 g
Collagenase NB 5 Sterile Grade from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Enzymatic properties see Collagenase NB 4 Sterile according to European requirements for medicinal products (Pharm. Eur.) 	<ul style="list-style-type: none"> Application fields see Collagenase NB 4 Sterile and thus ready to use 	17459.03	1 g
Collagenase NB 6 GMP Grade from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Enzymatic properties see Collagenase NB 4 Aseptic production according to European requirements for medicinal products (Pharm. Eur.) Manufactured according to international cGMP guidelines 	<ul style="list-style-type: none"> Application fields see Collagenase NB 4 Production of cells as well as tissue engineering for transplantation into humans 	17458.03	1 g
Collagenase NB 8 Broad Range from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Contains class I and class II collagenases, and reduced levels of clostripain, trypsin-like activities and neutral protease PZ activity* ≥ 0.9 U/mg lyophilisate Endotoxins ≤ 100 EU/ mg lyophilisate 	<ul style="list-style-type: none"> Isolation of e.g. cardiomyocytes, porcine hepatocytes, rodent pancreatic islets, tumor and thyroid cells 	17456.01 17456.02	250 mg 1 g
Collagenase N Reference Content from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Contains class I and class II collagenases and other proteolytic enzymes Collagenase activity is regularly reevaluated 	<ul style="list-style-type: none"> Reference substance for enzyme activity determination 	17463.01	≥ 50 mg
Collagenase N Reference Identity from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Contains class I and class II collagenases and other proteolytic enzymes 	<ul style="list-style-type: none"> Reference substance for SDS-PAGE analysis, performed for incoming goods inspection according to cGMP 	17464.01	≥ 50 mg

Enzymes	Properties	Application	Cat.-No.**	Pack Size**
Neutral Protease NB from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Chromatographically purified neutral protease Activity (DMC assay) ≥ 0.50 U/mg lyophilisate 	<ul style="list-style-type: none"> Tissue dissociation Cell isolation in combination with Collagenase NB 	30301.11 30301.12	50 DMC U/Vial 100 DMC U/Vial
Neutral Protease NB GMP Grade from <i>C. histolyticum</i>	<ul style="list-style-type: none"> Enzymatic properties see Neutral Protease NB Manufactured according to international GMP guidelines 	<ul style="list-style-type: none"> Tissue dissociation Cell isolation in combination with Collagenase NB GMP Grades for 	30303.01	≥ 100 DMC U/Vial
Anti-Collagenase from <i>C. histolyticum</i> polyclonal antibody from sheep	<ul style="list-style-type: none"> Specificity against collagenases from <i>C. histolyticum</i>. IgG fraction purified by Protein G affinity chromatography 	<ul style="list-style-type: none"> Use in ELISA and Western Blot experiments Immunostaining of tissue Analysis of residual collagenase impurities in cell preparations 	58050.01	100 μ g

*PZ activity according to Wunsch, measured at 25 °C

**Prices are available upon request

SERVA Collagenase NB is not intended for use in humans.
Responsibility for use of these enzymes in clinical applications and the methods to isolate, purify, cultivate and transplant cells lies solely with the providing physician/researcher.

For information and samples please contact
the SERVA Collagenase NB Team

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