

Application Note

Neutral Protease NB High Active Grade from *Clostridium histolyticum*

Product information

Neutral protease from *Clostridium histolyticum* is a proteolytic enzyme. It can be used for isolation of various cell types by tissue dissociation, mostly in combination with a Collagenase NB product.

Neutral Protease NB High Active Grade is a new grade that is chromatographically purified resulting in an increased proteolytic activity compared to Neutral Protease NB (≥ 0.50 U/mg (DMC)). It is largely free from collagenolytic activity (PZ U) and the endotoxin level is very low.

Specification

Neutral protease activity	≥ 5.0 U/mg (DMC)
Endotoxin	≤ 10 EU/mg

Storage conditions

Neutral Protease NB High Active Grade is provided as a lyophilized powder.

It should be stored at -15 to -25 °C in a dry environment. Under these conditions the product is stable until the minimum shelf life stated on the certificate of analysis.

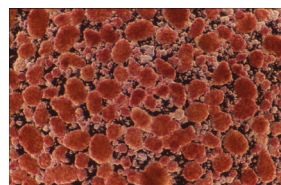
Order information

Product	Cat. No.	Pack size
Neutral Protease NB High Active Grade	30302.02	80 DMC U

Isolation of human pancreatic islets

Neutral Protease NB High Active Grade can be used together with Collagenase NB 1 Premium Grade (Cat. No. 17455) or Collagenase NB 1 GMP Grade (Cat. No. 17452). These combinations are especially suitable for isolation of human pancreatic islets of Langerhans.

Several facilities have shown **excellent performance** of Neutral Protease NB High Active Grade in human islet isolation and transplantation.



Human pancreatic islets, University of Giessen, Germany

Isolation of human pancreatic islets

Collagenase NB 1 Premium Grade:	15 - 20 PZ U/g*
Neutral Protease NB High Active Grade:	0.8 - 1.5 DMC U/g*
Isolation conditions	15 - 30 min, 37 °C

* U/g pancreatic tissue

In general the required Collagenase NB concentration depends on tissue type and origin as well as isolation procedure. The above stated concentrations should be considered as starting points and progress of the digestion process should be monitored visually in order to determine the optimal conditions.

The digestion process can be stopped e.g. by cooling down or dilution of the digestion solution.