

Application Note

Isolation of Human Adipocytes and ADSC with Collagenase NB 4 Standard Grade

Product Information Collagenase NB 4 Standard Grade

Collagenase NB 4 Standard Grade is designed for dissociation of different tissues to isolate various cell types, e.g. human adipocytes and adipose derived stem cells (ADSC) from adipose tissue and lipoaspirate. A balanced ratio of collagenase and other proteases guarantees a high yield of viable cells.

Specification

Collagenase activity: ≥ 0.1 U/mg (PZ*)

*PZ units acc. to Wunsch

The lot-specific activity of Collagenase NB 4 Standard Grade is stated on the certificate of analysis which is attached to every consignment.

Storage Conditions

Collagenase NB 4 Standard Grade is provided as a lyophilized powder and should be stored in a dry environment at +2 to +8 °C. Stock solutions can be 0.2 μ m filtered and stored at -20 °C for 1 year without loss of activity.

Clinical Applications

Collagenase NB 4 Standard Grade can be replaced by Collagenase NB 6 GMP Grade (Cat. No. N0002779) which shows comparable enzymatic properties but is produced according to GMP guidelines.

Ordering Information

Enzyme	Cat. No.	Pack size
Collagenase NB 4 Standard Grade	S1745402	500 mg
Collagenase NB 4 Standard Grade	S1745401	1 g
Collagenase NB 4 Standard Grade	S1745403	5 g

Isolation of Human Adipocytes and ADSC from Adipose Tissue and Lipoaspirate

Recommended Starting Conditions

Concentration of Collagenase NB 4 Standard Grade	0.2 – 0.3 PZ U/ml**
Isolation terms	30 – 60 min, 37 °C

** 0.1 - 0.15 PZ U/ml final collagenase concentration after addition of adipose tissue or lipoaspirate. PZ units acc. to Wunsch

In general the required collagenase concentration depends on tissue type and origin as well as isolation procedure. Therefore, Collagenase NB concentrations stated above 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 by adding EDTA, cooling down or diluting the digestion solution.

It is recommended to measure the concentration of the collagenase solution in PZ U/ml and not in mg/ml.

This ensures optimal reproducibility of isolations with collagenases from different lots, although Nordmark guarantees a high lot-to-lot consistency.

Collagenase NB products

- > **High cell yields and viability**
- > **Reliable lot-to-lot consistency**
- > **GMP grades available**

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