Application Note

Nordmark Biochemicals

Crescent Chemical Company

Isolation of human mesenchymal stem cells 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 stem cells from Wharton's jelly.
A balanced ratio of collagenase and other proteases guarantees a high yield of viable cells.

Specification

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

The activity of the 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 state at +2 to +8 °C.
Stock solutions can be filtered sterile 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. 17458) which shows comparable enzymatic properties.

Order Information

Enzyme	Cat. No.	Pack size
Collagenase NB 4 Standard Grade	17454.02	500 mg
Collagenase NB 4 Standard Grade	17454.01	1 g

*PZ units acc. to Wünsch

Isolation of human mesenchymal stem cells from Wharton's jelly

Concentration of Collagenase NB 4 Standard Grade	0.13 – 0.15 PZ U/ml
Isolation conditions	1 – 6 h, 37 °C

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 batches, although Nordmark guarantees a high lot-to-lot consistency.

Nordmark Collagenase NB Qualities

- High cell yields and viability
- Reliable lot-to-lot consistency
- GMP Grade available

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