

Application Note

Isolation of Human Schwann Cells Collagenase NB 1 GMP Grade & Neutral Protease NB GMP Grade

Product Information Collagenase NB 1 GMP Grade & Neutral Protease NB GMP Grade

Collagenase NB 1 GMP Grade and **Neutral Protease NB GMP Grade** are highly active and defined products designed to isolate especially sensitive cells like Schwann Cells from human nerve tissue. Both collagenases, class I and class II, are present.

Storage Conditions

The enzymes are provided as lyophilized powders and should be stored in a dry environment at +2 to +8 °C. Stock solutions can be 0.2 µm filtered and stored at -20 °C for 1 year without loss of activity.

Clinical Applications

Collagenase NB 1 GMP Grade and Neutral Protease NB GMP Grade are produced acc. to GMP guidelines. Documents, e.g. on TSE safety and stability studies are available on request.

For an animal-free alternative, use our Collagenase AF-1 GMP Grade (Cat. No. N0003554) and Neutral Protease AF GMP Grade (Cat. No. N0003553).

For research applications, the enzymes can be replaced by Collagenase NB 1 Premium Grade (Cat. No. S1745503) and Neutral Protease NB (Cat. No. S3030112).

Ordering Information

| Enzyme | Cat. No. | Pack size |
|-------------------------------|----------|--------------|
| Collagenase NB 1 GMP Grade | N0002937 | ≥ 2000 PZ* U |
| Neutral Protease NB GMP Grade | N0002936 | ≥ 100 DMC U |

* PZ units acc. to Wunsch

Isolation of Human Schwann Cells from Sural and Sciatic Nerve Tissue

Recommended Starting Conditions

| | |
|--|--------------------------|
| Concentration of Collagenase NB 1 GMP Grade | 0.5 PZ U/ml [†] |
| Concentration of Neutral Protease NB GMP Grade | 2 DMC U/ml [†] |
| Isolation Conditions | 18 hours, 37 °C |

[†]) added on day 5 for sural nerve and on day 7 for sciatic nerve

Enzymes should be stored separately and combined only at the time of digestion.

After dissection, cultivate fascicles for 5-7 days and then digest with intermittent agitation. Afterwards wash and place the cells into culture. Every three days cultures should be fed and evaluated for cell growth.

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.

To ensure optimal reproducibility, it is recommended to measure the concentration of the collagenase solution in PZ U/ml and not in mg/ml.

Collagenase NB products

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

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