

# Application Note

## Isolation of Human Endothelial Cells (HUVEC) 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 endothelial cells from umbilical vein.

A balanced ratio of collagenase and other proteases guarantees a high yield of viable cells.

### Specification

Collagenase activity:  $\geq 0.1$  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 delivery.

### 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  $\mu$ 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 has 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       |

For information and samples please contact the Crescent Chemical Co., Inc.

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### Isolation of Human Endothelial Cells from Umbilical Vein (HUVEC)

#### Recommended Starting Conditions

|  |                      |
|--|----------------------|
| Concentration of Collagenase NB 4 Standard Grade | 0.15 – 0.25 PZ U/ml* |
| Isolation terms                                  | 0.5 – 2 h, 37 °C     |

\*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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