



PRODUCT INFORMATION

Collagenase NB 4G Proved Grade

Cat. No. 17465

Product Description:

General Collagenase NB 4G is designed for dissociation of different tissues to isolate various cell types.
The Collagenase NB 4G Proved Grade producing strain of *Clostridium histolyticum* has been carefully selected for producing a collagenase product that is non-toxic according to the requirements of the European Pharmacopoeia. A balanced mix of collagenase and other proteases guarantees for high yields of viable cells.
Collagenase NB 4G is function tested.

Specification Collagenase activity ≥ 0.18 U/mg (PZ acc. to Wunsch)

Application Collagenase NB 4G Proved Grade is designed for dissociation of different tissues to isolate various cell types, e.g. chondrocytes, skin fibroblasts, hepatocytes which are used for research purposes.

Storage conditions Collagenase NB 4G Proved Grade is provided as a lyophilized powder and should be stored **in a dry state** at +2 to +8 °C.

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Instructions for use:

General Collagenase NB 4G Proved Grade is suitable for isolation of a broad variety of cell types, especially for fibroblasts, adipocytes, hepatocytes and oocytes. For isolation of each cell type a specific isolation procedure has to be applied to receive optimal yields of viable cells. For some cell types detailed protocol information is available.

Required enzymatic activity For establishing of the procedure the following concentrations of Collagenase NB 4G can be used as starting point:

Human:

Adipocytes (pre)	0.1 - 0.3 PZ-U/ml
Chondrocytes	0.36 PZ-U/ml
Fibroblasts (foreskin)	0.7 PZ-U/ml
Hepatocytes	0.36 PZ-U/ml

Others:

Hepatocytes (rat liver)	0.12 PZ-U/ml
Hepatocytes (bovine liver)	0.24 PZ-U/ml
Hepatocytes (murine liver)	0.12 PZ-U/ml
Fibroblasts (murine skin)	0.48 PZ-U/ml
Oocytes (Xenopus ovary)	0.3 – 0.5 PZ-U/ml
Epithelial cells (bovine udder)	0.1 PZ-U/ml

If digestion is incomplete or if cells are damaged, collagenase concentration, time or temperature should be increased or decreased, respectively.

Stock solution Collagenase NB 4G easily dissolves in a concentration of up to 150 mg/ml in all buffers which are generally used for cell isolation. Keep the enzyme solution on ice.
As collagenase and some of the secondary proteases depend on calcium, 2 mM Ca²⁺ should be added, and no calcium chelating agents (e.g. EDTA) should be used.

Working solution Stock solution is diluted with dissociation buffer to achieve the required enzymatic activity (see above).
Dissociation can be terminated by diluting the enzyme solution with buffer and cooling the system.