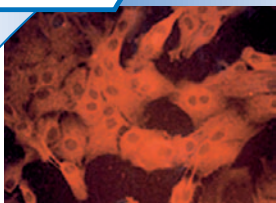


Biochemicals  
Electrophoresis  
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Life Sciences  
Specials



# Collagenase NB

## Application Details for Tissue Dissociation

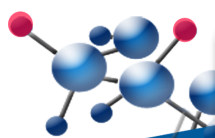


Isolation procedures of defined cell types from different species require individual protocols. The tables below show optimized digestion conditions using Collagenase NB qualities.

Cell type	Tissue	Species	Collagenase NB	Concentration	Experimental conditions	
Adipocytes (adult)	Adipose tissue	Human	NB 4 or NB 5	0.1 PZ-U/ml	30 min, 37 °C	
Adipocytes (pre)	Adipose tissue	Human	NB 4G	0.2 PZ-U/ml		
Cardiomyocytes	Heart	Human	NB 8	0.8-1.0 PZ-U/ml	2-3.5 h, 37 °C	
Chondrocytes	Cartilage	Human	NB 4, NB 5 or NB 6 NB 4G	0.36 PZ-U/ml	16 h, 37 °C	
Endothelial cells	Umbilical cord	Human	NB 4 or NB 5	0.12 PZ-U/ml	20-40 min, 37 °C	
Fibroblasts (skin)	Foreskin	Human	NB 4, NB 5 or NB 6	0.45 PZ-U/ml	5 ml, enough for 3 g dermis	Digestion in Hepes, 2 mM CaCl <sub>2</sub>
			NB 4G	0.7 PZ-U/ml	3 h, 37 °C, 5 ml	add.: Dispase digestion
Islets	Pancreas	Human	NB 1 + NP or NB 1 GMP + NP GMP	20 PZ-U (NB 1) + 0.2-0.9 DMC-U (NP) per gram organ	25-30 min, 37 °C	complete protocol available
Mesenchymal stromal cells	Umbilical cord	Human	NB 4, NB 5 or NB 6	0.24 PZ-U/ml	19 h, 37 °C	
Thyroid glands	Thyroid tissue	Human	NB 8	0.8-1.0 PZ-U/ml	6-7 h, 37 °C	
Tumor cells		Human	NB 8	0.8-1.0 PZ-U/ml	2-4 h, 37 °C	

Cell type	Tissue	Species	Collagenase NB	Concentration	Experimental conditions	
Cardiomyocytes	Heart	Rat	NB 8	0.5 PZ-U/ml	30 min + x add.: Hyaluronidase, protocol available	
Epithel cells	Mammary gland	Mouse	NB 4 or NB 5	0.34 PZ-U/ml	15-25 min, RT	
Fibroblasts	Skin	Mouse	NB 4G	0.48 PZ-U/ml	12-20 h, 37 °C	
Ganglion	Dorsal root	Rat (newborn)	NB 4 or NB 5	0.19 PZ-U/ml	25 min, 25 °C	
Hepatocytes	Liver	Mouse	NB 4G	0.12 PZ-U/ml	37 °C	perfusion rate 20 ml/min
				0.07-0.1 PZ-U/ml	37 °C	perfusion
Islets	Pancreas	Rat	NB 4 or NB 5	0.3 PZ-U/ml		
			NB 1 + NP	20 PZ-U (NB 1) + 0.4 DMC-U (NP) per rat	10-15 min, 37 °C	HBSS
Neurons	Hippocampus	Rat	NB 4 or NB 5	0.28 PZ-U/ml	25 min, 25 °C	

PZ activity according to Wunsch, measured at 25 °C



AMS Biotechnology Ltd  
UK & Rest of World  
63B Milton Park,  
OX14 4RX Abingdon, Oxon  
Tel: +44 (0) 1235 828 200  
Fax: +44 (0) 1235 820 482

AMS Biotechnology Ltd  
Switzerland  
Centro Nord-Sud 2E  
CH-6934 Bioggio-Lugano.  
Tel: +41 (0) 91 604 55 22  
Fax: +41 (0) 91 605 17 85

AMS Biotechnology Ltd  
Deutschland  
Tel: +49 (0) 69 779099  
Fax: +49 (0) 69 13376880

Isolation procedures of defined cell types from different species require individual protocols. The tables below show optimized digestion conditions using Collagenase NB qualities.

Cell type	Tissue	Species	Collagenase NB	Concentration	Experimental conditions	
Chondrocytes (articular)	Cartilage	Bovine	NB 4 or NB 5	0.3 PZ-U/ml	15-45 min, 37 °C	
Chondrocytes	Meniscus	Bovine	NB 8 + NP	1.2 PZ-U/ml + 1 DMC-U/ml	2 h, 37 °C	total volume: 20 ml
Hepatocytes	Liver	Dog or pig	NB 8	135 PZ-U/isolation		
Islets	Pancreas	Pig	NB 1 + NP or NB 1 GMP + NP GMP	15-18 PZ-U (NB 1) + 0.4-1.0 DMC-U (NP) per gram organ		UW solution
			NB 8 + NP	4.4 PZ-U (NB 8) + 0.7 DMC-U (NP) per gram organ	20-25 min, 37 °C	UW solution

Cell type	Tissue	Species	Collagenase NB	Concentration	Experimental conditions	
Oocytes	Ovary	Xenopus	NB 4 or NB 5	0.3-0.5 PZ-U/ml	2-3 h, RT	Complete protocol available
			NB 4G	0.3-0.5 PZ-U/ml	2 h, RT	

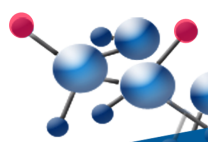
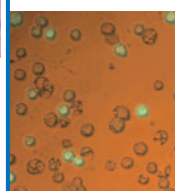
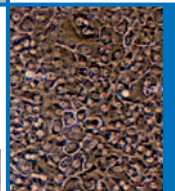
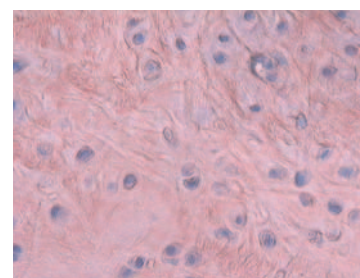
PZ activity according to Wünsch, measured at 25 °C

### Ordering Information

Collagenase	Abbr.	Quantity	Cat. No.
Collagenase NB 1 Premium Grade	NB 1	2,000 U	17455.03
Collagenase NB 1 GMP Grade	NB 1 GMP	2,000 U	17452.01
Collagenase NB 4 Standard Grade	NB 4	500 mg	17454.02
		1 g	17454.01
Collagenase NB 4G Proved Grade	NB 4G	500 mg	17465.01
		1 g	17465.02
Collagenase NB 5 Sterile Grade	NB 5	1 g (bag)	17459.01
		1 g (vial)	17459.03
Collagenase NB 6 GMP Grade	NB 6	1 g (bag)	17458.01
		1 g (vial)	17458.03
Collagenase NB 8 Broad Range	NB 8	250 mg	17456.01
		1 g	17456.02

Enzyme	Abbr.	Quantity	Cat. No.
Neutral Protease NB	NP	50 DMC-U	30301.11
		100 DMC-U	30301.12
Neutral Protease NB GMP Grade	NP GMP	100 DMC-U	30303.01

SERVA Collagenase NB is not intended for use in humans. Responsibility for use of these enzymes in clinical applications and the methods to isolate, purify, cultivate and transplant cells lies solely with



AMS Biotechnology Ltd  
UK & Rest of World  
63B Milton Park,  
OX14 4RX Abingdon, Oxon  
Tel: +44 (0) 1235 828 200  
Fax: +44 (0) 1235 820 482

AMS Biotechnology Ltd  
Switzerland  
Centro Nord-Sud 2E  
CH-6934 Bioggio-Lugano.  
Tel: +41 (0) 91 604 55 22  
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