4. Reagents

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PAN™ BIOTECH GmbH

Media Supplements

Description

Maximum efficiency without loss of quality.
PAN-Biotech reagents are tested according to the highest possible quality standards. All liquid reagents are dissolved according to in-house specifications, sterilized and filtrated up to 0.2 µm.

Before final release, the reagents undergo extensive quality tests e. g. sterility, pH value, osmo, endotoxin, and many other tests.

Different Media Supplements

HAT supplement (50x)	100 ml	P07-02100
HT supplement (50x)	100 ml	P07-01100
Hepes buffer 1M	100 ml 500 ml	P05-01100 P05-01500
Hepes – Sodium salt	100 g 500 g	P05-01100P P05-01500P
Sodium bicarbonate 7,5 %	100 ml	P04-44100
Sodium pyruvate 100 mM	100 ml	P04-43100
ITS solution I (100x)	5 ml 10 ml	P07-03100 P07-03110
ITS solution II (100x) modified composition to ITS solution I	5 ml 10 ml	P07-03200 P07-03210
ITS solution III (100x) modified composition to ITS solution I	5 ml 10 ml	P07-03300 P07-03310
ITS solution IV (100x) modified composition to ITS solution I	5 ml 10 ml	P07-03400 P07-03410
Insulin bovine 10 mg/ml	5 ml	P07-04100
Insulin human 10 mg/ml „rec. solution“	10 ml	P07-04300
Insulin human recombinant	100 mg	P07-04200
Sterile water for cell culture	500 ml 1 L 20 L	P04-991500 P04-991000 P04-992000
β-Mercapthoethanol 50 mM in PBS	20 ml 100 ml	P07-05020 P07-05100
Tryptose phosphate (50x) 130 g/l Tryptose phosphate in distilled water	100 ml	P10-031100
Pluronic F-68 10 %	100 ml	P08-02100
Human Transferrin apo	100 mg 500 mg 1 g	P06-21100 P06-21500 P06-21000
Demecolcin solution 10 mg/ml	10 ml	P07-91010
Isotonic salt solution	500 ml	P05-39500

Buffered Salt Solution

Dulbecco's Phosphate Buffered Salt Solution

Liquid Salt Solution

DPBS without Ca and Mg	500 ml	P04-36500
DPBS **(10x)** without Ca and Mg	500 ml	P04-53500
DPBS unsteril without Ca and Mg	2,5 L	P04-362500
DPBS with Ca and Mg	500 ml	P04-35500
DPBS **(10x)** with Ca and Mg	500 ml	P04-37500

Powder

DPBS without Ca and Mg	50 L	P04-36050P
DPBS with separate Ca and Mg	50 L	P04-35050P

Composition

	Components	mg/L
Inorganic Salts	Potassium chloride	200,00
	Potassium dihydrogen phosphate	200,00
	Sodium chloride	8000,00
	di-Sodium hydrogen phosphate anhydrous	1150,00
	Calcium chloride x $2H_2O$	133,00
	Magnesium chloride x $6H_2O$	100,00

Dulbecco's Phosphate Buffered Salt Solution

Liquid Salt Solution

EBSS	500 ml	P04-30500
EBSS without Phenol red	500 ml	P04-39500
EBSS without Ca and Mg without Phenol red	500 ml	P04-46500
EBSS without Ca and Mg with 2,2 g/l $NaHCO_3$	500 ml	P04-31500

Powder

EBSS	10 L 50 L	P04-30010P P04-30050P

Composition

	Components	mg/L
Inorganic Salts	Potassium chloride	400,00
	Sodium chloride	6800,00
	Sodium dihydrogen phosphate x H_2O	140,00
	Calcium chloride x $2H_2O$	264,92
	Magnesium sulphate dried	139,57
Other Compo-nents	D(+)-Glucose anhydrous	100,00
	Phenol red	10,00

Special Solutions

Minimum order quantity: 20 x 500 ml

EBSS **(10x)**	500 ml	P04-38500
EBSS **(10x)** without Ca and Mg without Phenol red	500 ml	P04-47500

Buffered Salt Solution

Gey's Balanced Salt Solution

Liquid Salt Solution

GBSS with 2,27 g/l $NaHCO_3$	100 ml 500 ml	P04-48100 P04-48500

Powder

GBSS without $NaHCO_3$	10 L 50 L	P04-48010P P04-48050P

Composition

	Components	mg/L
Inorganic Salts	Potassium chloride	370,00
	Sodium chloride	7000,00
	di-Sodium hydrogen phosphate	120,00
	Calcium chloride anhydrous	220,00
	Magnesium chloride x 6 H_2O	210,00
	Magnesium sulphate anhydrous	34,20
	Potassium dihydrogen phosphate anhydrous	30,00
Other Components	D(+)-Glucose anhydrous	1000,00

Hank's Balanced Salt Solution

Liquid Salt Solution

HBSS with 0,35 g/l $NaHCO_3$	100 ml 500 ml	P04-32100 P04-32500
HBSS **(10x)** without $NaHCO_3$	100 ml 500 ml	P04-49100 P04-49500
HBSS without Ca and Mg with 0,35 g/l $NaHCO_3$	100 ml 500 ml	P04-33100 P04-33500
HBSS **(10x)** without Ca and Mg without 0,35 g/l $NaHCO_3$	100 ml 500 ml	P04-50100 P04-50500
HBSS without Phenol red with 0,35 g/l $NaHCO_3$	100 ml 500 ml	P04-32105 P04-32505
HBSS **(10x)** without Phenol red without $NaHCO_3$	100 ml 500 ml	P04-49105 P04-49505
HBSS without Ca and Mg without Phenol red with 0,35 g/l $NaHCO_3$	100 ml 500 ml	P04-34100 P04-34500
HBSS **(10x)** without Ca and Mg without Phenol red without 0,35 g/l $NaHCO_3$	100 ml 500 ml	P04-50105 P04-50505

Powder

HBSS without $NaHCO_3$	10 L 50 L	P04-32010P P04-32050P
HBSS without Ca and Mg without $NaHCO_3$	10 L 50 L	P04-33010P P04-33050P

Composition

	Components	mg/L
Inorganic Salts	Potassium chloride	400,00
	Sodium chloride	8000,00
	Sodium dihydrogen phosphate dried	47,88
	Calcium chloride x $2H_2O$	186,58
	Magnesium sulphate dried	126,97
	Potassium dihydrogen phosphate	60,00
Other Components	D(+)-Glucose anhydrous	1000,00
	Phenol red	10,00

Buffered Salt Solution

Puck's Salt Solution A

Liquid Salt Solution

Puck's Salt Solution A	100 ml	P04-51100
	500 ml	P04-51500

Composition

	Components	mg/L
Inorganic Salts	Potassium chloride	400,00
	Sodium chloride	8000,00
Other Compo-nents	D(+)-Glucose anhydrous	1000,00
	Phenol red	5,00

Tyrode's Salt Solution

Liquid Salt Solution

Tyrode's Salt Solution	100 ml	P04-54100
	500 ml	P04-54500

Powder

Tyrode's Salt Solution without $NaHCO_3$	10 L	P04-54010P
	50 L	P04-54050P

Composition

	Components	mg/L
Inorganic Salts	Potassium chloride	200,00
	Sodium chloride	8000,00
	Magnesium chloride	100,00
	Calcium chloride	200,00
	Sodium phosphate monobasic	50,00
Other Compo-nents	D(+)-Glucose anhydrous	1000,00

Amino Acids and Vitamins

Amino Acids

BME solution (50x) ,without L-Glutamine	100 ml	P08-2000
BME solution (50x), with L-Glutamine	100 ml	P08-21100
BME (50x) supplement, without L-Glutamine Powder	1 L 5 L 10 L	P08-20101P P08-20105P P08-20110P

L-Glutamine 200 mM	50 ml 100 ml	P04-80050 P04-80100
Stable Glutamine 200 mM	50 ml 100 ml	P04-82050 P04-82100
L-Glutamine Powder	25 g 100 g 500 g	P04-80025P P04-80100P P04-80500P
Stable Glutamine Powder	10 g	P04-82010P

MEM (50x) without L-Glutamine	100 ml	P08-30100
MEM (50x) with L-Glutamine	100 ml	P08-31100
MEM NEAA (100x) without L-Glutamine	100 ml	P08-32100

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Amino Acids and Vitamins

Vitamins

BME vitamins	100 ml	P08-40100
MEM (100x) vitamine solution	100 ml	P08-41100

Antibiotics and Antifungal Drugs

Amphotericin B 250 µg/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-01001 P06-01005 P06-01050 P06-01100
Amphotericin B Powder	50 mg 100 mg	P06-01050P P06-01100P
Amphotericin B water soluble Powder	25 mg 50 mg	P06-01225P P06-01250P
Bacitracin Powder	10 g 25 g	P06-02010P P06-02025P
Hygromycin B (50 mg/ml)	20 ml 100 ml	P06-08020 P06-08100
Hygromycin B Powder	50 mg 1 g	P06-080050P P06-080100P
Gentamycin sulphate 10 mg/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-03001 P06-03005 P06-03050 P06-03100
Gentamycin sulphate 50 mg/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-13001 P06-13005 P06-13050 P06-13100
Gentamycin sulphate Powder	1 g 10 g 25 g	P06-03001P P06-03010P P06-03025P
Kanamycin sulphate 5 mg/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-04001 P06-04005 P06-04050 P06-04100
Kanamycin sulphate 10 mg/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-14001 P06-14005 P06-14050 P06-14100
Kanamycin sulphate 50 mg/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-15001 P06-15005 P06-15050 P06-15100
Kanamycin sulphate Powder	10 g 50 g	P06-04010P P06-04050P

Antibiotics and Antifungal Drugs

Minocyclin 0,5 mg/ml	50 ml 100 ml	P06-05050 P06-05100
Neomycin sulphate 10 mg/ml	50 ml 100 ml	P06-06050 P06-06100
Neomycin sulphate Powder	10 g 25 g 100 g	P06-06010P P06-06025P P06-06100P
Nystatin solution 10.000 Units/ml	100 ml	P06-07800
Paneticin 420 50 mg/ml	20 ml 100 ml	P06-16020 P06-16100
Paneticin 420 100 mg/ml	20 ml 100 ml	P06-17020 P06-17100
Paneticin 420 Powder	1 g 5 g 10 g	P06-16001P P06-16005P P06-16010P
Penicillin/Streptomycin 10.000 Units Penicillin/ml 10 mg Streptomycin/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-07001 P06-07005 P06-07050 P06-07100
Penicillin/Steptomycin/Amphotericin B Mix 10.000 Units Penicillin/ml 10 mg Streptomycin/ml 25 mg Amphotericin B/ml in 0,85 % saline	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-07301 P06-07305 P06-07350 P06-07300
Penicillin G potassium salt Powder	25 g 100 g	P06-08025P P06-08100P
Streptomycin sulphate Powder	25 g 50 g 100 g	P06-11025P P06-11050P P06-11100P
Polymyxin B sulphate 10.000 Units/ml	50 ml 100 ml	P06-09050 P06-09100
Polymyxin B sulphate Powder	1 g 5 g 10 g	P06-10001P P06-10005P P06-10010P
Tiamulin 1 mg/ml	50 x 1 ml 50 x 5 ml 50 ml 100 ml	P06-12001 P06-12005 P06-12050 P06-12100
Zeocin 100 mg/ml	10 ml	P06-28010

Enzymes for Cell Dissociation

Collagenases

Description

Collagenase type I
Natural balance of enzyme activity. Recommended for cell preparation from epithelial and lung tissue, tissue of the urprarenal gland and adipose tissue. Store at 2 - 8 °C.

Collagenase type II
With especially high activity of clostripain and trypsin. Recommended for cell preparation from liver tissue, bone tissue, tissue of the epithelial and lung tissue, tissue of the urprarenal gland and adipose tissue. Store at 2 - 8 °C.

Collagenase type III
Normal collagenase activity at minimum additional proteolytic activity. Especially recommended for breast tissue. Store at 2 - 8 °C.

Collagenase type IV
Selected low tryptic activity at high collagenase activity and normal clostripain level. Recommended for cell preparation from the pancreatic island. Store at 2 - 8 °C.

Collagenase type/Typ I (Worthington – USA origin)	100 mg 1 g	LS0004194 LS0004196
Collagenase type/Typ II (Worthington – USA origin)	100 mg 1 g	LS0004174 LS0004176
Collagenase type/Typ III (Worthington – USA origin)	100 mg 1 g	LS0004180 LS0004182
Collagenase type/Typ IV (Worthington – USA origin)	100 mg 1 g	LS0004186 LS0004188

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Trypsins and other

Description

Application: for dissociation of tissue and Cell-monolayern

Storage: Solutions at -20 °C (frozen) / Powder at 2 - 8 °C.

Shelf life: Solutions 24 months / Powder 36 months. The shelf life commences at date of production. Our Trypsin is negative tested on mycoplasma!

Trypsin 0,25 % in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-021100 P10-021500
(10x) Trypsin 2,5 % in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-022100 P10-022500
Trypsin 0,25 %/EDTA 0,02 % in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-020100 P10-020500
Trypsin 0,25 %/EDTA 0,02 % in PBS without Ca^{2+} and Mg^{2+} with Phenol red	100 ml 500 ml	P10-019100 P10-019500
Trypsin 0,05 %/EDTA 0,02 % in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-023100 P10-023500
Trypsin 0,05 %/EDTA 0,02 % in PBS without Ca^{2+} and Mg^{2+} with Phenol red	100 ml 500 ml	P10-0231SP P10-0235SP
(10x) Trypsin 0,5%/EDTA 0,2% in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-024100 P10-024500
Trypsin 0,05 %/EDTA 0,1 % in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-027100 P10-027500
Trypsin 0,25 %/ 1 mM EDTA 4 NA in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-028100 P10-028500
Trypsin 0,05 %/EDTA 0,02 % in HBSS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-030100 P10-030500

continue →

Enzymes for Cell Dissociation

Trypsins and other

Trypsin 0,05 %/EDTA 0,02 % in HBSS without Ca^{2+} and Mg^{2+} with Phenol red	100 ml 500 ml	P10-038100 P10-038500
Trypsin 0,25 %/ 1 mM EDTA in HBSS without Ca^{2+} and Mg^{2+} with Phenol red	100 ml 500 ml	P10-029100 P10-029500
Trypsin 0,05 %/EDTA 4 Na 0,02 % in HBSS with Phenol red	100 ml 500 ml	P10-040100 P10-040500
Trypsin spezial solution (for ES-cells)	100 ml 500 ml	P10-100100 P10-100500
(5x) Trypsin spezial solution (for ES-cells)	100 ml 500 ml	P10-050100 P10-050500
(10x) Trypsin 0,5 %/EDTA 4 Na 5,3 mM without Phenol red without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-025100 P10-025500
Trypsin Inhibitor 1 mg/ml	100 ml 500 ml	P10-033100 P10-033500
Trypsin powder (1 : 250) porcine origin	25 g 100 g 500 g	P10-025025P P10-025100P P10-025500P

EDTA 1 % in PBS without Ca^{2+} and Mg^{2+}	100 ml 500 ml	P10-026100 P10-026500

Dispase II neutral proteins, grade II	100 ml	P10-032100
Dispase purified neutral protease	10 mg	LS0002100

4

Attachment Factors

Collagen A

Description

Acid-soluble collagen from bovine placenta

- Add an equal volume of sterile PBS to the collagen.
- Add 1 ml per 10 cm^2 of culture flask and incubate at +35 - +37 °C for 30 min.
- Remove solution and wash 1x with PBS; use culture flasks immediately.

In monolayer culture, normal human and murine liver cells were successfully grown for a period of up to one week, provided that the culture flasks were coated with collagen A. Porcine cells, however, do not require such coating with the same settings.

Cell growth rates can often be improved by surface coating with attachment factors such as fibronectin, collagen, gelatine or polylysine.

With a collagen coating, survival time of hepatocytes can be extended from normally one week to four weeks.

Storage: +2 - +8 °C

Collagen A	1x (6 x 5 ml)	P06-20030

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Attachment Factors

Collagen R (type I)

Description

0,2 % sterile solution:
Type 1 rat tail collagen; 2 mg/ml in 0,1 % acetic acid.
Excellent substrate for the culture of hepatocytes, fibroblasts and epithelial cells.

0,4 % sterile solution:
Type 1 rat tail collagen; 4 mg/ml in 0,1 % acetic acid.
Excellent substrate for the culture of hepatocytes, fibroblasts and epithelial cells.

Collagen R 0,2 % sterile solution	20 ml 100 ml	P06-20166 P06-20100
Collagen R 0,4 % sterile solution	20 ml	P06-20020

Laminin mouse

Description

This highly purified preparation of mouse Laminin I increases cell adhesion, migration, growth, and differentiation. It is composed of α1β1γ1 chains with a total MW of 800 kD and is used for the coating of culture dishes.

Source: Murine Engelbreth-Holm-Swarm (EHS) tumor.

Storage Buffer: Dulbecco's Modified Eagle's Medium with 10 µg/ml gentamycin sulfate.

Storage: Store at -20 °C or at -80 °C in a manual defrost freezer.

Purity: Purity > 90 % by SDS-PAGE.

Specifications:

Functional Assays:

- Supports the formation of neuronal filaments of NG108-15 cells in a neurite outgrowth assay.

Sterility Testing:

- No bacterial or fungal growth detected after incubation at 37 °C for 14 days following USP XXIV, Chapter 71 sterility testing.
- No mycoplasma contamination detected by PCR.
- Endotoxin concentrations < 20 EU/ml by LAL assay.

Coating Procedure:
The recommended working concentration is 0.05 - 10 µg/cm^2 of growth surface (0.05 - 10 µg/ml) depending on cell type.

a. Thaw stock solution on ice for several hours. Place plates on ice and prechill pipette tips. In an laminar flow hood, dilute appropriately with cold tissue culture plates. Spread the solution to completely cover the bottom of the wells.

b. The following table is a guide for the suggested volumes required per well:

Plate Type Volume	Laminin per Well
6 wells (or 35 mm dish)	1 ml
24 wells	200 µl
48 wells	50 µl
96 wells	20 µl

c. Incubate the plates at 37 °C for 1 hour. In the laminar flow hood, remove excess liquid from the wells of the tissue culture plate.

Rinse the wells once with tissue culture medium and then add your cells.

Laminin from mouse	1 mg	P06-20501

Attachment Factors

Albumins

Description

Albumins conduct as a protein addition for tissue cultures. They are the main component in blood sera and are added to culture media to increase the stability of cell membranes and to bind possible toxic trace elements.

Bovine Serum Albumin Fraction V	25 g 50 g 100 g 250 g 500 g	P06-1391025 P06-1391050 P06-1391100 P06-1391250 P06-1391500
Bovine Serum Albumin crystallized	1 g 5 g 25 g 50 g	P06-0846001 P06-0846005 P06-0846025 P06-0846050
Bovine Serum Albumin microbiological grade	10 g 50 g 250 g 500 g	P06-0849010 P06-0849050 P06-0849250 P06-0849500
Bovine Serum Albumin H2 globuline-free	5 g 10 g	P06-0848005 P06-0848010

Human Serum Albumin	25 g 50 g	P06-26025 P06-26050

Rabbit Serum Albumin	10 g	P06-210010

Gelantine Solution

Description

The gelatine solution is used for coating cell culture dishes. It is applied in cell culture at work with for instant endothelial cells or ES-cells.

Gelatine solution 0,1 % in PBS	500 ml	P06-20410
Gelatine solution 2 % in PBS	500 ml	P06-25200

Separating Agent Solution

Pancoll and Powercoll

Description

Often the isolation of cells or of sub-cellular particles is the first step in gene expression research or in diagnostic examinations. Apart from the bio-specific separation methods physical separation methods are most commonly used. In these methods physical differences such as size and charge of the particles to be separated are utilised.

For this purpose so-called separating solutions (= centrifugation media) are used.

These media must comply with the following criteria:

- They must be able to form a density gradient over the desired range
- The desired pH value and the desired osmolality must be easily adjustable
- The solutions must not be too viscous in case of high density
- They must not cause any functional or morphological changes in biological materials
- They must not penetrate biological membranes

Our separating solution – Pancoll – are made from a neutral, highly cross-linked, hydrophilic polymer of sucrose with an average molecular weight of 400000 D.

Powercoll consists of a colloidal suspension of silica particles, loaded with polyvinyl pyrrolidone (PVP).

Storage: +2 °C to ambient temperature

With a proper storage separating solutions can be kept for at least 36 months. The storage period starts on the manufacturing date.

Pancoll human, density/Dichte 1,077 g/ml	100 ml 500 ml	P04-60100 P04-60500
Pancoll mouse, density/Dichte 1,086 g/ml	100 ml 500 ml	P04-64100 P04-64500
Pancoll rat, density/Dichte 1,091 g/ml	100 ml 500 ml	P04-65100 P04-65500
Pancoll animal, density/Dichte 1,077 g/ml	100 ml 500ml	P04-63100 P04-63500
Pancoll monocytes, density/Dichte 1,068 g/ml	100 ml 500 ml	P04-68100 P04-68500
Pancoll Platelets, density/Dichte 1,063 g/ml	100 ml 500 ml	P04-67100 P04-67500

Powercoll, density/Dichte 1,077 g/ml	100 ml 500 ml	P04-61100 P04-61500
Powercoll, density/Dichte 1,124 g/ml	100 ml 500 ml	P04-62100 P04-62500

Separating Agent Solution

Lymphocyte Separating Medium

Description

Ready-to-use tubes

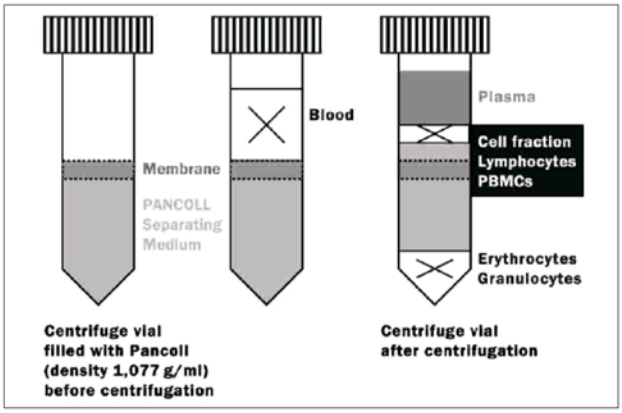
Benefit from the advantages:

• Reduced contamination risk and less time required because there is one less pipetting step (centrifuge vial is already filled with separating solution).

• The porous membrane (frit) prevents the blood introduced from mixing with the separating medium. This leads to an improvement in separation with less impurities.

• After centrifugation and separation of the cell fractions the porous membrane prevents repeated contamination of the lymphocytes with undesirable cell types.

• Dilution of the blood beforehand is not necessary but it can improve the result of separation.



Please see data sheet provided with Pancoll for instruction for use.

References:

a) Berge M et al. (2010) Small interfering RNAs induce target-independent inhibition of tumor growth and vasculature remodeling in a mouse model of hepatocellular carcinoma. American Journal of Pathology (Epub ahead of print)

b) Derfuss T et al. (2009) Contactin-2/TAG-1-directed autoimmunity is identified in multiple sclerosis patients and mediates gray matter pathology in animals. Proceedings of National Academy of Science 106:8302

c) Ladhoff J et al. (2009) Low immunogenicity of endothelial derivatives from rat embryonic stem cell-like cells. Cell Research 19:507

d) Meixenberger K et al. (2010) Listeria monocytogenes-infected human peripheral blood mononuclear cells produce IL-1ß, depending on listeriolysin O and NLRP3. Journal of Immunology 184:922

e) Leiherer A et al. (2009) Uncoupling human immunodeficiency virus type 1 gag and pol reading frames: role of the transframe protein p6 in viral replication. Journal of Virology 83:7210

f) Jo J et al. (2010) Analysis of CD8 T-cell-mediated inhibition of hepatitis C virus replication using a novel immunological model. Gastroenterology 136:1391

Pancoll human, density/Dichte 1,077 g/ml	25 x 50 ml 50 x 10 ml	P04-60125 P04-60225
Pancoll mouse, density/Dichte 1,086 g/ml	25 x 50 ml 50 x 10 ml	P04-64125 P04-64225
Pancoll rat, density/Dichte 1,091 g/ml	25 x 50 ml 50 x 10 ml	P04-65125 P04-65225
Pancoll animal, density/Dichte 1,077 g/ml	25 x 50 ml 50 x 10 ml	P04-63125 P04-63225

Cryo Preservation

Dimethylsulfoxide (DMSO)

Description

DMSO (Dimethylsulfoxide) is a colourless organic solvent which penetrates completely into the cell and prevents the damaging formation of ice crystals during the freezing procedure.

Dimethylsulfoxide (DMSO)	100 ml	P60-15840100
Dimethylsulfoxide (DMSO) for cell culture	100 ml	P60-36720100

Freezing Medium

Description

Our Freezing medium is recommended for deep-freezing of medium. The medium basis is DMEM, supplemented with a mix of foetal bovine serum and DMSO.

This composition guarantees a high survival rate and a good cell growth after thawing.

Freezing medium	50 ml	P07-90050

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CRYOPAN

Description

Introduction for use
freezing of cells with CRYOPAN (in a nitrogen tank)

- Refrigerate freezing medium, culture medium and freezing tubes!
- Trypsinate cells, than transfer the cells into the culture medium and centrifuge. Discard the supernatant and reinsert into the culture medium again.
- Regulate the cell amount to 1 - 5 10^6/ml. The cells must be resuspended to avoid clustering.
- Mix the centrifuged cells with the same volume of cooled freezing medium and pipette it up and down once. Pipette 1 ml of this cell suspension in every freezing tube.
- Now place the tubes into the refrigerator for 15 minutes, because the freezing medium has to penetrate the cells. After this freeze the tubes at -20 °C for two hours. Over night, place into the gas phase of the liquid nitrogen.
- Then put freezing tubes into the liquid nitrogen.

Ideal freezing rate: 1 °C/minute

Cryopan I	10 ml 50 ml	P07-92010 P07-92050

PAN SL-S Product Line

SERUM-FREE Endothelial Cell Culture System

Description

Endothelial cell biology has been greatly advanced by studying cultured vascular endothelial cells in vitro. Besides the understanding of many physiologic and pathologic processes, a multitude of basic cell signalling processes has been elucidated by using endothelial cells in culture. Traditionally, complete endothelial growth media contain animal serum. The advance of so-called low-serum media for endothelial cells has improved the quality of experimental data acquired in recent years. However, endothelial cells may synthesize substances which can not be detected due to their low quantity or masking effects from serum. In the past, cellular signalling pathways in endothelial cells have not been decipherable experimentally because even low concentrations of serum present in traditional media induce an undefined and undesired stimulation of cell surface receptors or intracellular signalling which only may become evident under serum-free conditions. As endothelial cells move into the field of interest for vascular tissue engineering with potential therapeutic application, the presence of whole animal serum is undesirable for such applications in the future.

All products described below are intended for use in a **SERUM-FREE Endothelial Cell Culture System**. Endothelial cells from different sources may be employed. For convenient use in this system, PAN Biotech GmbH offers endothelial cells from human umbilical cord strictly isolated und cultured under animal serum-free conditions. This exclusive cell culture system is optimized for the maintenance and expansion of endothelial cells under serum-free conditions. Information about the composition, suitability, special advantages, and instructions are given for each individual product. For more information on SERUM-FREE Endothelial Cell Culture System from PAN Biotech GmbH, please see accompanying data sheets.

PANEXIN SL-S is a genuine serum substitute which can fully replace FBS in otherwise completely supplemented endothelial cell culture media.

SL-S Trypsin/EDTA has been specifically designed for use in serum-free cell culture systems. A relatively low activity of trypsin results in gentle detachment of endothelial cells; a low phenol red concentration acts as a convenient indicator while providing mild conditions for the cells.

SL-S Medium is a working medium for rinsing of culture vessels after trypsin reaction to ensure a complete harvest of cells or for short time incubation of endothelial cells in growth factor free conditions. This medium is not suited for growth or long term culture of endothelial cells.

SL-S Trypsin Inhibitor is optimized to stop trypsin reaction and simultaneously providing ideal conditions for endothelial cells to recover from trypsin activity.

SL-S Collagen has been developed as a ready-to-use solution for the coating of new culture vessels in endothelial subculture.

SL-S Cryopan is a serum-free medium for cryo-conservation of endothelial cells resulting in high rates of recovery of viable cells after thawing.

PANEXIN SL-S Serum Substitute for HUVEC cultures	25 ml	P04-90065S
SL-S Trypsin/EDTA	50 ml	P10-0231SF
SL-S Trypsin-Inhibitor	50 ml	P10-0331SF
SL-S Medium (Working Medium)	500 ml	P04-300500
SL-S Collagen 0.01 %	25 ml	P06-20650
SL-S Cryopan	25 ml	P07-94050