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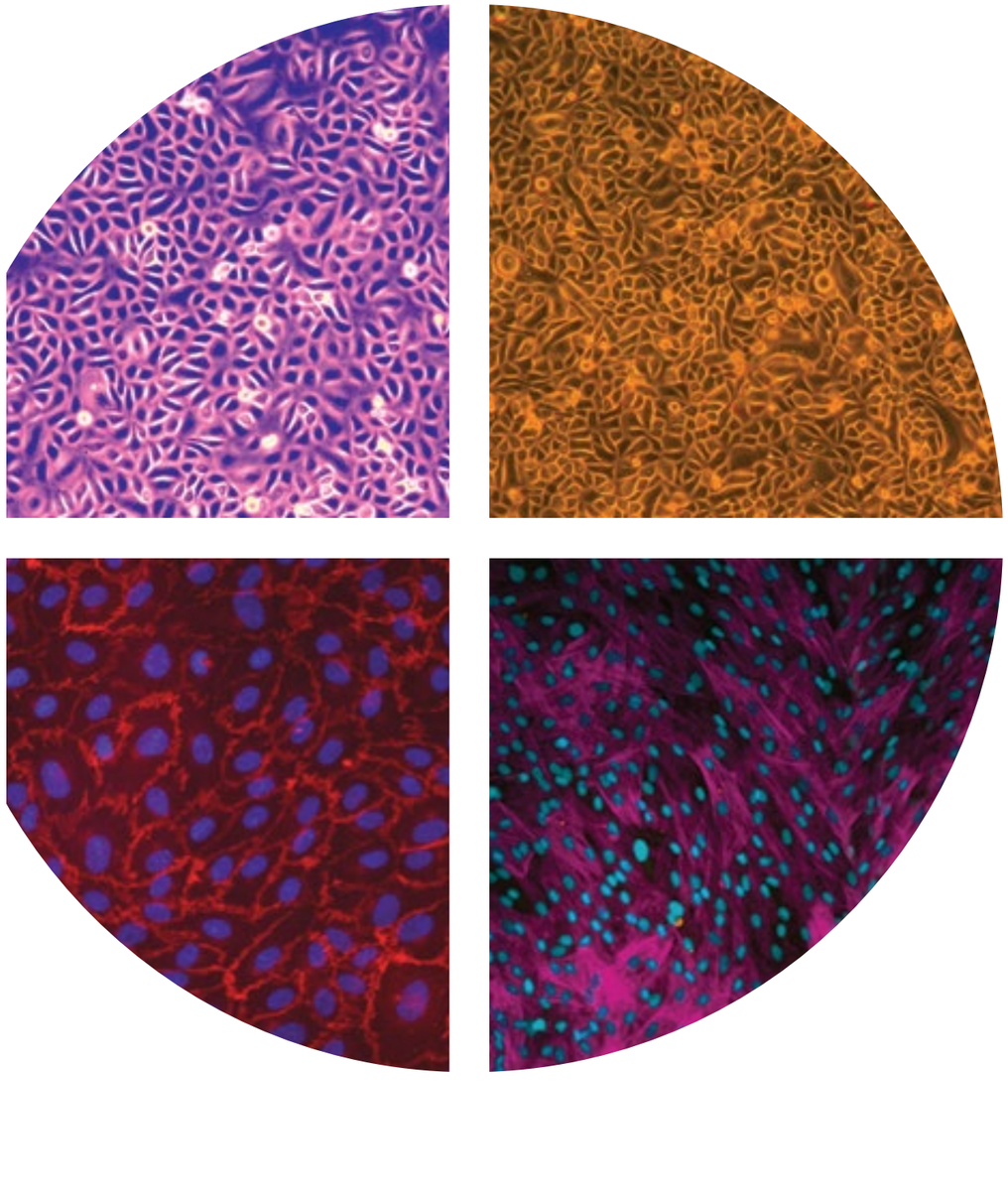
Primary cell solutions



Primary cell cultures more closely mimic the physiological state of cells *in vivo* and generate more relevant data representing living organisms.[1]

ATCC® Primary Cell Solutions® is a system of matched components designed to maximize growth, maximize functionality and maintain normal morphology for specific cell types. Putting all the pieces together adds up to your success.

Primary Cells | **Media** | **Growth Kits** | **Reagents** | **Great Data**

Cell Type	Product Name	ATCC® No.	Species	Number of viable cells-post thaw	Passage at freezing	Cells tested upon thaw to achieve	Basal media	Growth kit	Reagents and supplements	Additional Reagents	Applications
Endothelial Cells	Umbilical Vein Endothelial Cells; Normal, Human	PCS-100-010	Human	≥5 x 10^5	1	≥15 PDL	Vascular Cell Basal Medium (ATCC® No. PCS-100-030)	Endothelial Cell Growth Kit-BBE (ATCC® No. PCS-100-040) or Endothelial Cell Growth Kit-VEGF (ATCC® No. PCS-100-041)	Phenol Red (ATCC® No. PCS-999-001); D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	NA	Physiological and pharmacological investigations, such as macromolecule transport, blood coagulation, angiogenesis, and fibrinolysis
	Umbilical Vein Endothelial Cells; Normal, Human, Pooled	PCS-100-013	Human	≥5 x 10^5	2	≥15 PDL					
	Aortic Endothelial Cells; Normal, Human	PCS-100-011	Human	≥5 x 10^5	2	≥15 PDL					Studies of vascular diseases such as thrombosis, atherosclerosis, metabolism, hypertension, stent-graft compatibility testing, and membrane conductance models
	Coronary Artery Endothelial Cells; Normal, Human	PCS-100-020	Human	≥5 x 10^5	3	≥15 PDL					
	Pulmonary Artery Endothelial Cells; Normal, Human	PCS-100-022	Human	≥5 x 10^5	3	≥15 PDL					
	Dermal Microvascular Endothelial Cells; Normal, Human, Neonatal	PCS-110-010	Human	≥5 x 10^5	3	≥15 PDL		Microvascular Endothelial Cell Growth Kit-BBE (ATCC® No. PCS-110-040) or Microvascular Endothelial Cell Growth Kit-VEGF (ATCC® No. PCS-110-041)			Studies of microvascular functions and cutaneous inflammation
Smooth Muscle Cells	Aortic Smooth Muscle Cells; Normal, Human	PCS-100-012	Human	≥5 x 10^5	2	≥15 PDL	Vascular Cell Basal Medium (ATCC® No. PCS-100-030)	Vascular Smooth Muscle Cell Growth Kit (ATCC® No. PCS-100-042)	Phenol Red (ATCC® No. PCS-999-001); D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	NA	Studies of vascular diseases such as thrombosis, and atherosclerosis
	Coronary Artery Smooth Muscle Cells; Normal, Human	PCS-100-021	Human	≥5 x 10^5	2	≥15 PDL					
	Pulmonary Artery Smooth Muscle Cells; Normal, Human	PCS-100-023	Human	≥5 x 10^5	2	≥15 PDL					
Epithelial Cells	Small Airway Epithelial Cells; Normal, Human	PCS-301-010	Human	≥5 x 10^5	1	≥15 PDL	Airway Epithelial Cell Basal Medium (ATCC® No. PCS-300-030)	Small Airway Epithelial Cell Growth Kit (ATCC® No. PCS-301-040) or Bronchial Epithelial Cell Growth kit (ATCC® No. PCS-300-040)	Phenol Red (ATCC® No. PCS-999-001); D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	NA	Asthma, airway inflammation, and wound healing, pulmonary fibrosis, COPD, cancer, toxicology, intracellular pH regulations, IL-1b effect to stimulate airway epithelial cell growth, ICAM-1 expression
	Bronchial/Tracheal Epithelial Cells; Normal, Human	PCS-300-010	Human	≥5 x 10^5	1	≥15 PDL					
	Renal Proximal Tubule Epithelial Cells; Normal, Human	PCS-400-010	Human	≥5 x 10^5	2	≥15 PDL	Renal Epithelial Cell Basal Medium (ATCC® No. PCS-400-030)	Renal Epithelial Cell Growth Kit (ATCC® No. PCS-400-040)			*In vitro* studies of osmoregualtion and excretion, renal fibrosis, inflammation, as well as applications in drug screening/development, such as hypertension, diabetes, oncology, autoimmune disease, and toxicology screening
	Renal Cortical Epithelial Cells; Normal, Human	PCS-400-011	Human	≥5 x 10^5	1	≥15 PDL					
	Renal Mixed Epithelial Cells; Normal, Human	PCS-400-012	Human	≥5 x 10^5	1	≥15 PDL					
	Prostate Epithelial Cells; Normal, Human	PCS-440-010	Human	≥5 x 10^5	2	≥15 PDL	Prostate Epithelial Cell Basal Medium (ATCC® No. PCS-440-030)	Prostate Epithelial Cell Growth Kit (ATCC® No. PCS-440-040)			Hormonal regulation of the prostate, the secretory function of prostate cells, and prostate cancer
	Corneal Epithelial Cells; Normal, Human	PCS-700-010	Human	≥5 x 10^5	2	3 passages	Corneal Epithelial Cell Basal Medium (ATCC® No. PCS-700-030)	Corneal Epithelial Cell Growth Kit (ATCC® No. PCS-700-040)			Cell de-differentiation, toxicology testing and drug development
	Mammary Epithelial Cells; Normal, Human	PCS-600-010 ***Coming soon***	Human	≥5 x 10^5	2	≥15 PDL	Mammary Epithelial Cell Medium (ATCC® No. PCS-600-030) ***Coming soon***	Mammary Epithelial Cell Growth Kit (ATCC® No. PCS-600-040) ***Coming soon***			A normal *in vitro* control, useful for studying stages of breast cancer development, three dimensional culture and carcinogen screening
Fibroblasts	Dermal Fibroblasts; Normal, Human Neonatal	PCS-201-010	Human	≥5 x 10^5	1	≥10 PDL in serum-free medium	Fibroblast Basal Medium (ATCC® No. PCS-201-030)	Fibroblast Growth Kit–Serum-Free (ATCC® No. PCS-201-040) or Fibroblast Growth Kit–Low Serum (ATCC® No. PCS-201-041)	Phenol Red (ATCC® No. PCS-999-001); D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	0.1% Gelatin Solution (ATCC® No. PCS-999-027) only for use with Mitomicin C treated Dermal Fibroblasts	Wound healing studies, tissue engineering and regeneration applications, as well as induction of pluripotent stem (iPSCs)
	Dermal Fibroblasts; Normal, Human Neonatal, Mitomicin C treated	PCS-201-011	Human	≥3 x 10^6	2	No growth or divison beyond 4 weeks					Feeder cells for use with human stem cells and keratinocytes
	Dermal Fibroblasts; Normal, Human Adult	PCS-201-012	Human	≥5 x 10^5	1	≥10 PDL in serum-free medium					Wound healing studies, tissue engineering and regeneration applications, as well as induction of pluripotent stem (iPSCs)
Keratinocytes	Epidermal Keratinocytes; Normal, Human, Neonatal Foreskin	PCS-200-010	Human	≥5 x 10^5	1	≥15 PDL	Dermal Cell Basal Medium (ATCC® No. PCS-200-030)	Keratinocyte Growth Kit (ATCC® No. PCS-200-040)	Phenol Red (ATCC® No. PCS-999-001); D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	NA	Studies of growth factor activity, wound healing, toxicity/irritancy studies, and use as target cells for derivation of induced pluripotent stem cells
	Epidermal Keratinocytes; Normal, Human, Adult	PCS-200-011	Human	≥5 x 10^5	1	≥15 PDL					
Melanocytes	Epidermal Melanocytes; Normal, Human, Neonatal Foreskin	PCS-200-012	Human	≥5 x 10^5	2	≥15 PDL	Dermal Cell Basal Medium (ATCC® No. PCS-200-030)	Melanocyte Growth Kit (ATCC® No. PCS-200-041)	Phenol Red (ATCC® No. PCS-999-001); D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	NA	Wound healing, testing models for toxicity/irritancy studies, melanoma, dermal response to UV radiation, psoriasis and other skin diseases, and cosmetic research
	Epidermal Melanocytes; Normal, Human, Adult	PCS-200-013	Human	≥5 x 10^5	2	≥15 PDL					
Mesenchymal Stem Cells	Umbilical Cord-Derived Mesenchymal Stem Cells; Normal, Human	PCS-500-010	Human	≥5 x 10^5	2	≥10 PDL	Mesenchymal Stem Cell Basal Medium (ATCC® No. PCS-500-030)	Mesenchymal Stem Cell Growth Kit-Low Serum (ATCC® No. PCS-500-040)	Phenol Red (ATCC® No. PCS-999-001); D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	Adipocyte Differentiation Tool (ATCC® No. PCS-500-050) Chondrocyte Differentiation Tool (ATCC® No. PCS-500-051) Osteocyte Differentiation Tool (ATCC® No. PCS-500-052)	Stem cell differentiation, induced pluripotent stem cell research, tissue engineering, cell therapy, and regenerative medicine
	Adipose-Derived Mesenchymal Stem Cells; Normal, Human	PCS-500-011	Human	≥1 x 10^6	2	≥10 PDL					
	Bone Marrow-Derived Mesenchymal Stem Cells; Normal, Human	PCS-500-012 ***Coming soon***	Human	≥1 x 10^6	2	≥10 PDL		Mesenchymal Stem Cell Growth Kit for Bone Marrow MSCs (ATCC® No. PCS-500-041) ***Coming soon***		Adipocyte Differentiation Toolkit for BM-MSCs (ATCC® No. PCS-500-053) ***Coming soon***	Useful as an *in vitro* model for the study of multipotent stem cell biology, differentiation, and regenerative medicine and tissue engineering
	Primary Subcutaneous Preadipocyte; Normal, Human	PCS-210-010	Human	≥1 x 10^6	2	≥15 PDL	Fibroblast Basal Medium (ATCC® No. PCS-201-030)	Fibroblast Growth Kit –Low Serum (ATCC® No. PCS-201-041)	D-PBS (ATCC® No. 30-2200); Trypsin-EDTA for Primary Cells (ATCC® No. PCS-999-003); Trypsin Neutralizing Solution (ATCC® No. PCS-999-004)	Adipocyte Differentiation Tool (ATCC® No. PCS-500-050)	Differentiation research, tissue engineering, cell therapy, and regenerative medicine

[1]Compared to continuous cell lines