

Table 16: ATCC Primary Cells and Needed Reagents

All of these ATCC primary cells products are human species and require the following reagents: Phenol Red (ATCC PCS-999-001); D-PBS (ATCC 30-2200); Trypsin-EDTA for Primary Cells (ATCC PCS-999-003); Trypsin Neutralizing Solution (ATCC PCS-999-004).

Product Name (ATCC number)	Applications	Number of viable cells-post thaw	Passage at freezing	Cells tested upon thaw to achieve	Basal media	Growth kit	Additional Reagents		
Endothelial Cells									
Umbilical Vein Endothelial Cells; Normal, Human (PCS-100-010)	Physiological and pharmacological investigations, such as macromolecule transport, blood coagulation, angiogenesis, and fibrinolysis	$\geq 5.0 \times 10^5$	1	≥ 15 PDL	Vascular Cell Basal Medium (PCS-100-030)	Endothelial Cell Growth Kit-BBE (PCS-100-040) or Endothelial Cell Growth Kit-VEGF (PCS-100-041)	Not applicable		
Umbilical Vein Endothelial Cells; Normal, Human, Pooled (PCS-100-013)		$\geq 5.0 \times 10^5$	2	≥ 15 PDL					
Aortic Endothelial Cells; Normal, Human (PCS-100-011)	Studies of vascular diseases such as thrombosis, atherosclerosis, metabolism, and hypertension, stent-graft compatibility testing, and membrane conductance models	$\geq 5.0 \times 10^5$	2	≥ 15 PDL	Vascular Cell Basal Medium (PCS-100-030)	Microvascular Endothelial Cell Growth Kit-BBE (PCS-110-040) or Microvascular Endothelial Cell Growth Kit-VEGF (PCS-110-041)	Not applicable		
Coronary Artery Endothelial Cells; Normal, Human (PCS-100-020)		$\geq 5.0 \times 10^5$	3	≥ 15 PDL					
Pulmonary Artery Endothelial Cells; Normal, Human (PCS-100-022)		$\geq 5.0 \times 10^5$	3	≥ 15 PDL					
Dermal Microvascular Endothelial Cells; Normal, Human, Neonatal (PCS-110-010)	Studies of microvascular functions and cutaneous inflammation	$\geq 5.0 \times 10^5$	3	≥ 15 PDL	Vascular Cell Basal Medium (PCS-100-030)	Microvascular Endothelial Cell Growth Kit-BBE (PCS-110-040) or Microvascular Endothelial Cell Growth Kit-VEGF (PCS-110-041)			
Smooth Muscle Cells									
Aortic Smooth Muscle Cells; Normal, Human (PCS-100-012)	Studies of vascular diseases, such as thrombosis and atherosclerosis	$\geq 5.0 \times 10^5$	2	≥ 15 PDL	Vascular Cell Basal Medium (PCS-100-030)	Vascular Smooth Muscle Cell Growth Kit (PCS-100-042)	Not applicable		
Coronary Artery Smooth Muscle Cells; Normal, Human (PCS-100-021)		$\geq 5.0 \times 10^5$	2	≥ 15 PDL					
Pulmonary Artery Smooth Muscle Cells; Normal, Human (PCS-100-023)		$\geq 5.0 \times 10^5$	2	≥ 15 PDL					
Lung Smooth Muscle Cells; Normal, Human (PCS-130-010)		$\geq 5.0 \times 10^5$	2	> 15 PDL					
Bronchial/Tracheal Smooth Muscle Cells; Normal, Human (PCS-130-011)		$\geq 5.0 \times 10^5$	2	> 15 PDL					
Bladder Smooth Muscle Cells; Normal, Human (PCS-420-012)		$\geq 5.0 \times 10^5$	2	> 15 PDL					
Uterine Smooth Muscle Cells; Normal, Human (PCS-460-010)		$\geq 5.0 \times 10^5$	2	> 15 PDL					
Epithelial Cells									
Small Airway Epithelial Cells; Normal, Human (PCS-301-010)	Asthma, airway inflammation, and wound healing, pulmonary fibrosis, COPD, cancer, toxicology, intracellular pH regulations, IL-1b effect to stimulate airway epithelial cell growth, and ICAM-1 expression	$\geq 5.0 \times 10^5$	1	≥ 15 PDL	Airway Epithelial Cell Basal Medium (PCS-300-030)	Small Airway Epithelial Cell Growth Kit (PCS-301-040) or Bronchial Epithelial Cell Growth Kit (PCS-300-040)			
Bronchial/Tracheal Epithelial Cells; Normal, Human (PCS-300-010)		$\geq 5.0 \times 10^5$	1	≥ 15 PDL					
Lobar Bronchial Epithelial Cells; Normal, Human (PCS-300-015)	Asthma, airway inflammation, and wound healing, pulmonary fibrosis, COPD, cancer, toxicology, intracellular pH regulations, IL-1b effect to stimulate airway epithelial cell growth, and ICAM-1 expression	$\geq 5.0 \times 10^5$	1	> 10 PDL	Airway Epithelial Cell Basal Medium (PCS-300-030)	Bronchial Epithelial Cell Growth Kit (PCS-300-040)			
Renal Proximal Tubule Epithelial Cells; Normal, Human (PCS-400-010)	In vitro studies of osmoregulation and excretion, renal fibrosis, inflammation, as well as applications in drug screening/development, eg, hypertension, diabetes, oncology, autoimmune disease, and toxicology screening	$\geq 5.0 \times 10^5$	2	≥ 15 PDL	Renal Epithelial Cell Basal Medium (PCS-400-030)	Renal Epithelial Cell Growth Kit (PCS-400-040)			
Renal Cortical Epithelial Cells; Normal, Human (PCS-400-011)		$\geq 5.0 \times 10^5$	1	≥ 15 PDL					
Renal Mixed Epithelial Cells; Normal, Human (PCS-400-012)		$\geq 5.0 \times 10^5$	1	≥ 15 PDL					
Bladder Epithelial Cells (A/T/N); Normal, Human (PCS-420-010)	Incontinence and reconstruction studies or development of a potential diagnostic method for the early detection of bladder cancer cells	$\geq 5.0 \times 10^5$	2	> 15 PDL	Bladder Epithelial Basal Medium (PCS-420-032)	Bladder Epithelial Growth Kit (PCS-420-042)	Not applicable		
Prostate Epithelial Cells; Normal, Human (PCS-440-010)	Hormonal regulation of the prostate, the secretory function of prostate cells, and prostate cancer	$\geq 5.0 \times 10^5$	2	≥ 15 PDL	Prostate Epithelial Cell Basal Medium (PCS-440-030)	Prostate Epithelial Cell Growth Kit (PCS-440-040)			
Vaginal Epithelial Cells; Normal, Human (PCS-480-010)	Cancer studies, microbiological organism to cell interaction, toxicity studies	$\geq 5.0 \times 10^5$	3	> 10 PDL	Vaginal Epithelial Basal Medium (PCS-480-030)	Vaginal Epithelial Growth Kit (PCS-480-040)			
Cervical Epithelial Cells; Normal, Human (PCS-480-011)	Pathophysiology of cervical polyps, HPV, and cervical cancer	$\geq 5.0 \times 10^5$	3	> 10 PDL	Cervical Epithelial Cell Basal Medium (PCS-480-032)	Cervical Epithelial Cell Growth Kit (PCS-480-042)			
Mammary Epithelial Cells; Normal, Human (PCS-600-010)	Breast cancer development, and 3-D culture and carcinogen screening	$\geq 5.0 \times 10^5$	3	> 15 PDL	Mammary Epithelial Cell Basal Medium (PCS-600-030)	Mammary Epithelial Cell Growth Kit (PCS-600-040)			
Corneal Epithelial Cells; Normal, Human (PCS-700-010)	Cell de-differentiation, toxicology testing, and drug development	$\geq 5.0 \times 10^5$	2	3 passages	Corneal Epithelial Cell Basal Medium (PCS-700-030)	Corneal Epithelial Cell Growth Kit (PCS-700-040)			
Fibroblasts									
Dermal Fibroblasts; Normal, Human Neonatal (PCS-201-010)	Wound healing studies, tissue engineering and regeneration applications, as well as induction of pluripotent stem (iPSCs)	$\geq 5.0 \times 10^5$	1	≥ 10 PDL in serum-free medium	Fibroblast Basal Medium (PCS-201-030)	Fibroblast Growth Kit-Serum-Free (PCS-201-040) or Fibroblast Growth Kit-Low Serum (PCS-201-041)	0.1% Gelatin Solution (PCS-999-027) only for use with Mitomycin C treated Dermal Fibroblasts		
Dermal Fibroblasts; Normal, Human Adult (PCS-201-012)	Wound healing studies, tissue engineering and regeneration applications, as well as induction of pluripotent stem (iPSCs)	$\geq 5.0 \times 10^5$	1	≥ 10 PDL in serum-free medium					
Lung Fibroblasts; Normal, Human (PCS-201-013)	Lung disorders and infections, lung reconstruction studies, and advancement of cancer research	$\geq 5.0 \times 10^5$	2	> 15 PDL					
Gingival Fibroblasts; Normal, Human (PCS-201-018)	Regenerative medicine studies, alternate source of MSCs	$\geq 5.0 \times 10^5$	2	> 15 PDL					
Bladder Fibroblasts; Normal, Human (PCS-420-013)	Detection of bladder cancer cells, reconstruction studies, and advancement of cancer research	$\geq 5.0 \times 10^5$	2	> 15 PDL					
Uterine Fibroblast; Normal, Human (PCS-460-010)	Research related to female reproductive biology, drug testing, and oncology	$\geq 5.0 \times 10^5$	2	> 15 PDL			Not applicable		
Keratinocytes									
Epidermal Keratinocytes; Normal, Human, Neonatal Foreskin (PCS-200-010)	Studies of growth factor activity, wound healing, toxicity/irritancy studies, and use as target cells for derivation of induced pluripotent stem cells	$\geq 5.0 \times 10^5$	1	≥ 15 PDL	Dermal Cell Basal Medium (PCS-200-030)	Keratinocyte Growth Kit (PCS-200-040)	Not applicable		
Epidermal Keratinocytes; Normal, Human, Adult (PCS-200-011)		$\geq 5.0 \times 10^5$	1	≥ 15 PDL					
Gingival Keratinocytes; Normal, Human (PCS-200-014)		Antibiotic treatment, dental implants, and many other applications for oral biology research	$\geq 5.0 \times 10^5$	2				> 15 PDL	
Melanocytes									
Epidermal Melanocytes; Normal, Human, Neonatal Foreskin (PCS-200-012)	Wound healing, testing models for toxicity/irritancy studies, melanoma, dermal response to UV radiation, psoriasis and other skin diseases, and cosmetic research	$\geq 5.0 \times 10^5$	2	≥ 15 PDL	Dermal Cell Basal Medium (PCS-200-030)	Melanocyte Growth Kit (PCS-200-041)	Not applicable		
Epidermal Melanocytes; Normal, Human, Adult (PCS-200-013)		$\geq 5.0 \times 10^5$	2	≥ 15 PDL					
Mesenchymal Stem Cells									
Umbilical Cord-Derived Mesenchymal Stem Cells; Normal, Human (PCS-500-010)	Adult stem cell differentiation research, induced pluripotent stem cell lines, tissue engineering, cell therapy, and regenerative medicine	$\geq 5.0 \times 10^5$	2	≥ 10 PDL	Mesenchymal Stem Cell Basal Medium (PCS-500-030)	Mesenchymal Stem Cell Growth Kit-Low Serum (PCS-500-040)	Adipocyte Differentiation Tool (PCS-500-050)		
Adipose-Derived Mesenchymal Stem Cells; Normal, Human (PCS-500-011)		$\geq 1.0 \times 10^6$	2	≥ 10 PDL			Chondrocyte Differentiation Tool (PCS-500-051)		
Bone Marrow-Derived Mesenchymal Stem Cells; Normal, Human (PCS-500-012)		Useful as an in vitro model for the study of multipotent stem cell biology, differentiation, and regenerative medicine and tissue engineering	$\geq 1.0 \times 10^6$	2			≥ 10 PDL	Mesenchymal Stem Cell Growth Kit for Bone Marrow MSCs (PCS-500-041)	Adipocyte Differentiation Toolkit for BM-MSCs (PCS-500-053)
Primary Subcutaneous Preadipocytes; Normal, Human (PCS-210-010)		Differentiation research, tissue engineering, cell therapy, and regenerative medicine	$\geq 1.0 \times 10^6$	2			≥ 15 PDL	Fibroblast Basal Medium (PCS-201-030)	Fibroblast Growth Kit-Low Serum (PCS-201-041)
Skeletal Muscle Cells									
Skeletal Muscle Cells; Normal, Human (PCS-950-010)	Ideal culture model for the study of muscle cell biology, diabetes, insulin receptor studies, muscle cell metabolism, muscle tissue repair, and myotube development	$\geq 5.0 \times 10^5$	3	> 10 PDL	Mesenchymal Stem Cell Basal Medium (PCS-500-030)	Skeletal Muscle Growth Kit (PCS-950-040)	Skeletal Muscle Differentiation Tool (PCS-950-050)		