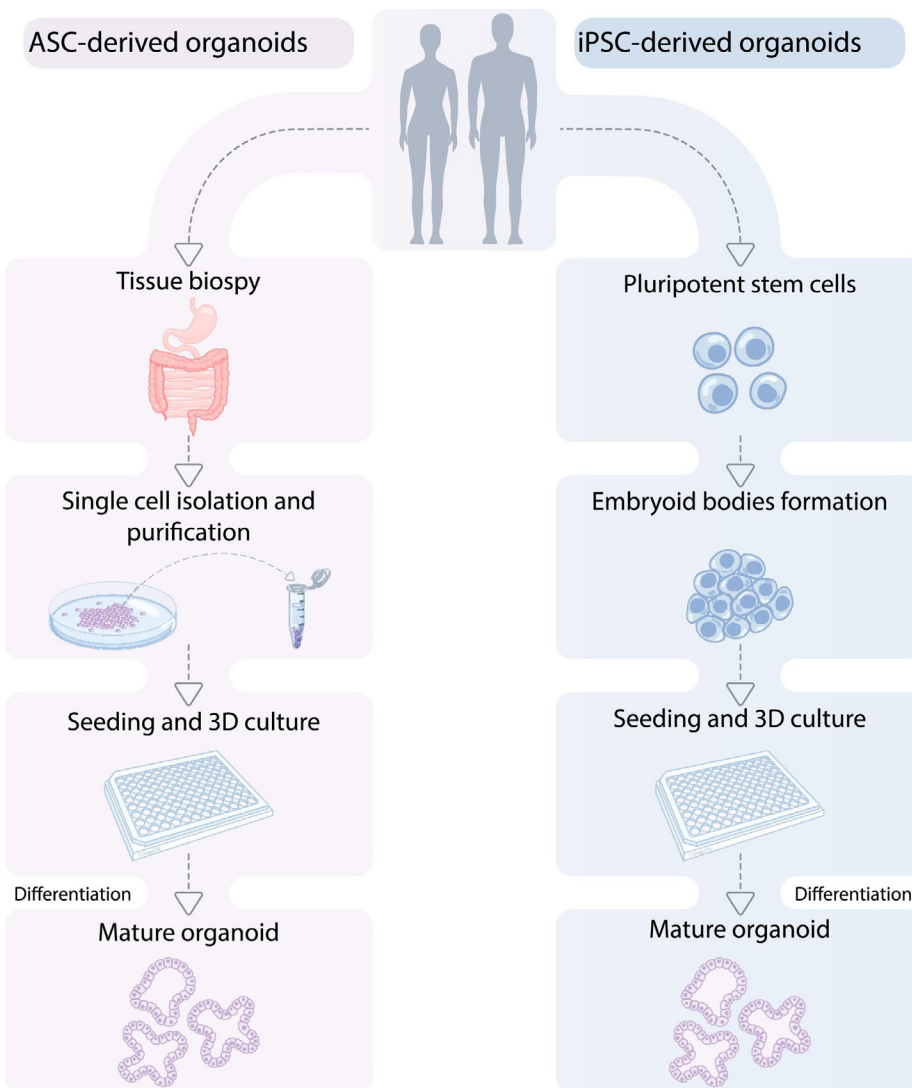


Solutions for Organoid Research

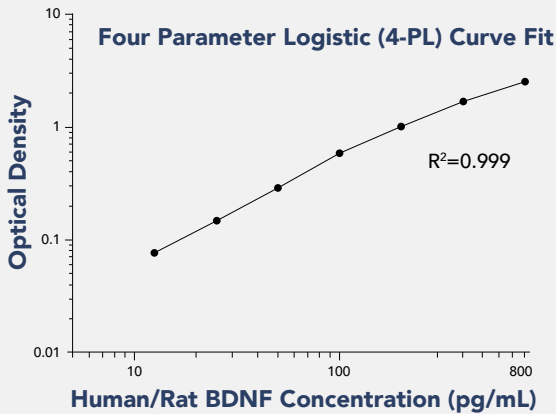


Adult Stem Cell and iPSCs-derived organoid culture steps

Credits- Heinzlmann E. et al. (2024).

Unlock the potential of your organoid research with our high-quality antibodies, growth factors, and other reagents. Designed for accuracy and consistency, our products are trusted by leading labs to accelerate discoveries in stem cell biology and disease modeling.

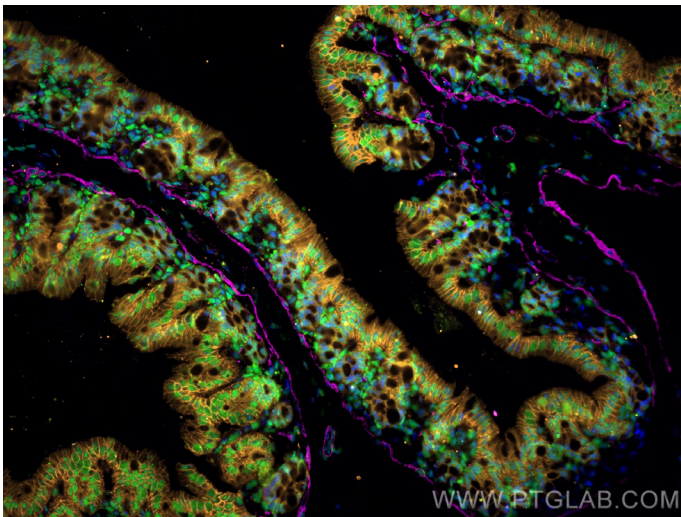
Supporting Reagents



Ultra sensitive ELISA kits to profile organoid secretome

Proteintech's ELISA kits are available for the detection of proteins, cytokines, growth factors, chemokines.

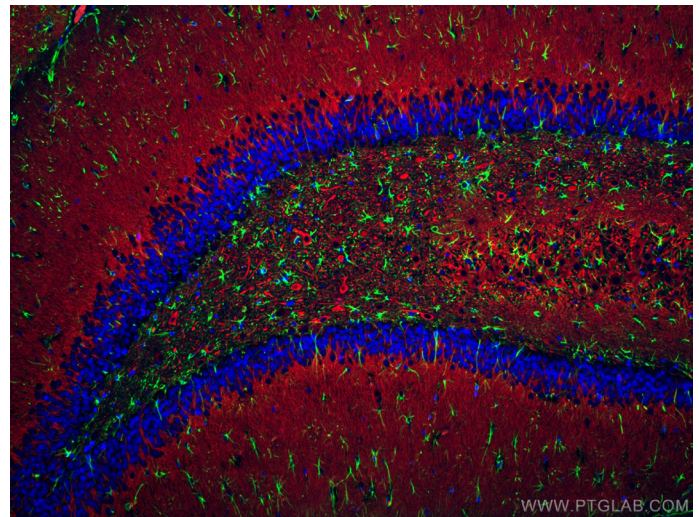
- ✓ 750+ ELISA kits
- ✓ 10X-20X more sensitive Authentikine ELISAs
- ✓ Validated in relevant biological samples



Easy Antibody Labeling with FlexAble kits

A novel antibody labeling method which uses an affinity linker to conjugate fluorescent dyes, enzymes and more...

- ✓ Label as little as 0.5ug of antibody
- ✓ Fast and easy 2-step protocol – Ready to use in 10 minutes
- ✓ Enable same species multiplexing
- ✓ No buffer exchange or purification after labeling needed



CoraLite conjugated antibodies for direct immunofluorescence

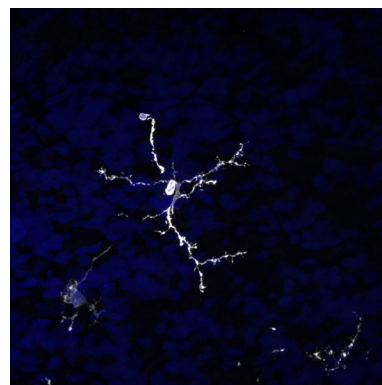
- ✓ 4000+ products exclusively developed for immunofluorescence
- ✓ Highly bright and photostable CoraLite dyes
- ✓ Available in 5 different colours for easy multiplexing
- ✓ Broad portfolio covering stem cell and differentiation markers

Growth Factors for Organoid Differentiation

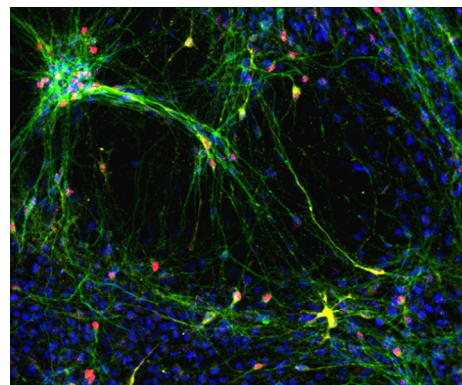
HumanKine growth factors are produced in HEK293 cells to ensure human-like post-translational modifications, resulting in optimal biological activity and functionality

Organoid Type	Growth Factor	Cat. No.
Cerebral Organoids	EGF	HZ-1326
	FGF2	HZ-1285
	BDNF	HZ-1335
	NT3	In development
Retinal Organoids	IGF-1	HZ-1322
	DKK1	HZ-1314
	Noggin	HZ-1118
	FGF2	HZ-1285
Lung Organoids	Wnt3a	HZ-1296
	EGF	HZ-1326
	Noggin	HZ-1118
	FGF10	In development
	BMP4	HZ-1045
Intestinal Organoids	KGF (FGF7)	HZ-1100
	EGF	HZ-1326
	Noggin	HZ-1118
	R-spondin1	HZ-1328
Gastric Organoids	Wnt3a	HZ-1296
	EGF	HZ-1326
	FGF10	In development
	Noggin	HZ-1118
Liver Organoids	Wnt3a	HZ-1296
	HGF	HZ-1084
	EGF	HZ-1326
	FGF10	In development
	Oncostatin M	HZ-1030
Pancreatic Organoids	Wnt3a	HZ-1296
	EGF	HZ-1326
	Noggin	HZ-1118
	R-spondin1	HZ-1328
	Betacellulin	HZ-1339
Kidney Organoids	KGF (FGF7)	HZ-1100
	FGF10	In development
	Wnt3a	HZ-1296
	Activin A	HZ-1138
Cardiac Organoids	GDNF	HZ-1311
	FGF9	HZ-1329
	BMP4	HZ-1045
Thymic Organoids	Activin A	HZ-1138
	VEGF	HZ-1038
	BMP4	HZ-1045
Esophageal Organoids	KGF (FGF7)	HZ-1100
	FGF10	In development
	Wnt3a	HZ-1296
	R-spondin1	HZ-1328
Prostate Organoids	Noggin	HZ-1118
	FGF10	In development
	Wnt3a	HZ-1296
	R-spondin1	HZ-1328
	Noggin	HZ-1118
	EGF	HZ-1326

- ✓ Higher bioactivity and stability in cell culture.
- ✓ Greater cell differentiation.
- ✓ GMP availability for clinical grade organoid manufacturing.



Human iPSC-derived microglia (white) residing within an in vivo brain-like organoid environment (blue) derived using HumanKine growth factors TGF beta 1 (HZ-1011), BMP4 (HZ-1045), and Thrombopoietin (HZ-1248).
Credit: Simon T. Schafer & Monique Pena, Technical University of Munich, Center for Organoid Systems



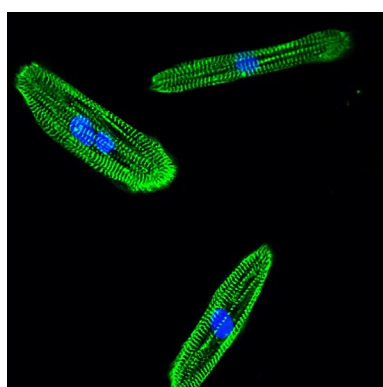
Human iPSCs were differentiated to **dopaminergic neurons** using HumanKine growth factors GDNF (HZ-1311) and FGF8B (HZ-1103). The differentiation was confirmed by detection of expression of TAU (green), Alpha-Synuclein (red) and Tyrosine hydroxylase (TH) (yellow)

Credit: Alessandro Bellapianta Johannes Kepler Universitat

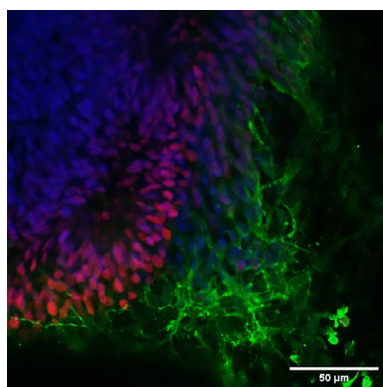
Growth factors required for organoid differentiation and maintenance

Antibodies for Organoid Characterization

- ✓ Accurate identification and characterization of specific cell types.
- ✓ All antibodies are rigorously tested and validated for use in multiple applications.
- ✓ Broad portfolio that fits into various organoid workflow.



Human iPSC derived **cardiomyocyte** in 2D culture, with alpha actinin (14221-1-AP) and DAPI. Image courtesy of Chandan Kadir Nagaraju, Experimental Cardiology, KU Leuven, Belgium.



Retinal organoids (day 30) generated from human induced pluripotent stem cells (iPSCs) and fixed with 4% PFA. Stained for Tubulin beta 3/TUJ1 using 66375-1-Ig (green) and PAX6 (red) (12323-1-AP) at 1:500. Nuclear stain DAPI (blue). Data generated by Alessandro Bellapianta at Johannes Kepler Universität, Austria.

Organoid Type	Characterization Marker	Cat. No.
Cerebral Organoids	PAX6	84345-5-RR
	SOX2	66411-1-Ig
	TBR1	66564-1-Ig
	TUJ1	66375-1-Ig
	MAP2	67015-1-Ig
	GFAP	81063-1-RR
Retinal Organoids	PAX6	84345-5-RR
	CRX	67555-1-Ig
	NRL	17388-1-AP
	VSX2	25825-1-AP
Lung Organoids	Recoverin	10073-1-AP
	NKX2.1	66034-1-Ig
	SOX2	66411-1-Ig
	SOX9	67439-1-Ig
	SFTPC	10774-1-AP
	FOXP1	28443-1-AP
Intestinal Organoids	CDX2	82659-1-RR
	LGR5	30007-1-AP
	MUC2	27675-1-AP
	Villin	16488-1-AP
	Lysozyme	66456-1-Ig
	Chromogranin A	60135-2-Ig
Gastric Organoids	SOX2	66411-1-Ig
	PDX1	10951-1-AP
	MUC5AC	20725-1-AP
	GATA4	19530-1-AP
Liver Organoids	AFP	14550-1-AP
	ALB	66051-1-Ig
	HNF4α	26245-1-AP
	CK18	82817-5-RR
Pancreatic Organoids	CYP3A4	67110-1-Ig
	PDX1	10951-1-AP
	NKX6.1	84355-1-RR
	INS	66198-1-Ig
	GCG	67286-1-Ig
	WT1	82525-1-RR
Kidney Organoids	PAX2	29307-1-AP
	E-Cadherin	83991-4-RR
	NPHS1	66970-1-Ig
Cardiac Organoids	NKX2.5	13921-1-AP
	cTnT	68300-1-Ig
	MYL2	60229-1-Ig
	ACTN2	14221-1-AP
Thymic Organoids	FOXP1	66337-1-Ig
	KRT5	66727-1-Ig
	KRT8	10384-1-AP
	AIRE	66262-1-Ig
Esophageal Organoid	DLL4	32331-1-AP
	P63	12143-1-AP
	SOX2	66411-1-Ig
	KRT5	66727-1-Ig
	KRT13	83058-1-RR
	NKX2.1	66034-1-Ig
Prostate Organoid	AR	81844-1-RR
	NKX3.1	13069-1-AP
	KRT8	10384-1-AP
	KRT5	66727-1-Ig
	PSA	84059-5-RR

List of Proteintech antibodies for characterization of various organoids