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Regenix™

Ready-to-use, Organ-specific ECM

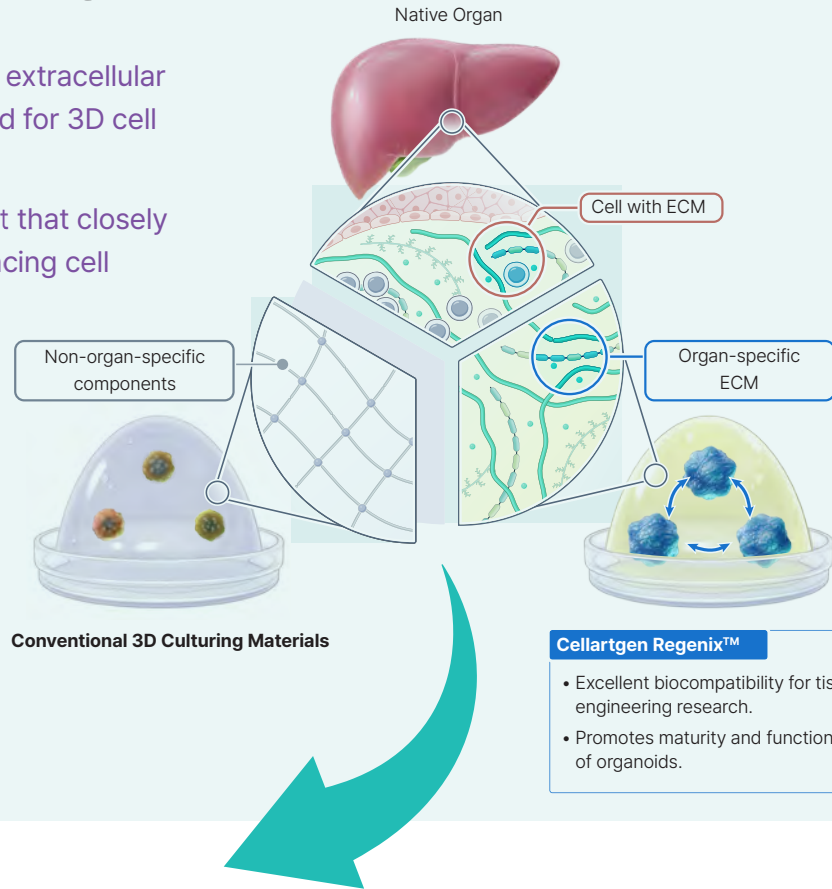
Innovation in Regenerative Medicine

Organoid & Biomaterials

Cellartgen Regenix™

Regenix™ is an organ-specific extracellular matrix (ECM) solution designed for 3D cell culture and transplantation.

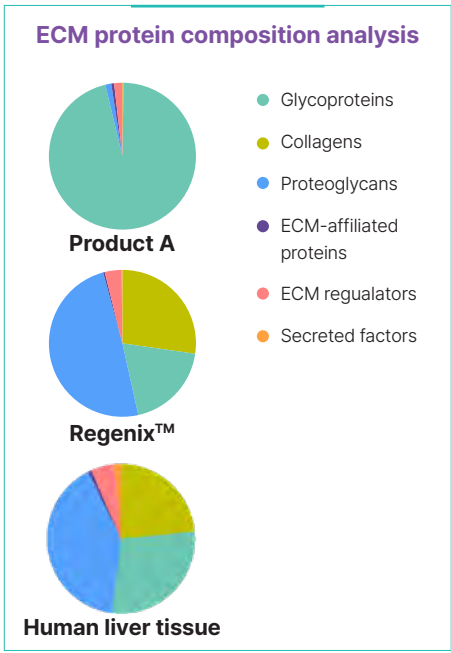
It provides a microenvironment that closely mimics an actual organ, enhancing cell maturity and functionality.



- Cellartgen Regenix™**
- Excellent biocompatibility for tissue engineering research.
 - Promotes maturity and functionality of organoids.

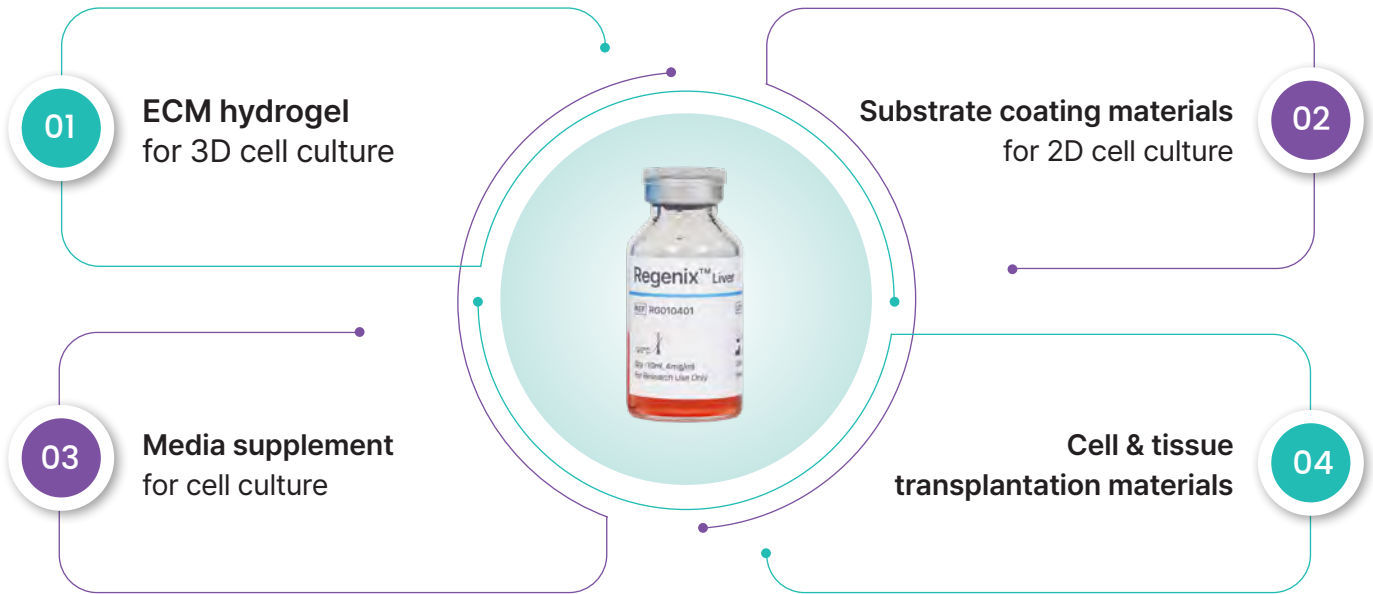
Evaluation of competitor products in organoid culturing performance.

Product Name	Regenix™	A	B	C	D
Raw materials	Normal porcine tissue	Mouse sarcoma	Normal porcine tissue	Collagen I	Synthetic peptide
Formulation	Ready-to-use	Ready-to-use	Requires preparation before use	Requires preparation before use	Ready-to-use
Organoid Formation Efficiency	████████	████████		████████	
Proliferation Efficiency	████████	████████	Culturing failure	████████	Culturing failure
Differentiation Efficiency	████████	████████		████████	
Possibility of Clinical applications	○	×	○	○	○



Strong alternative to conventional culture matrix, the only option for organoid therapeutics.

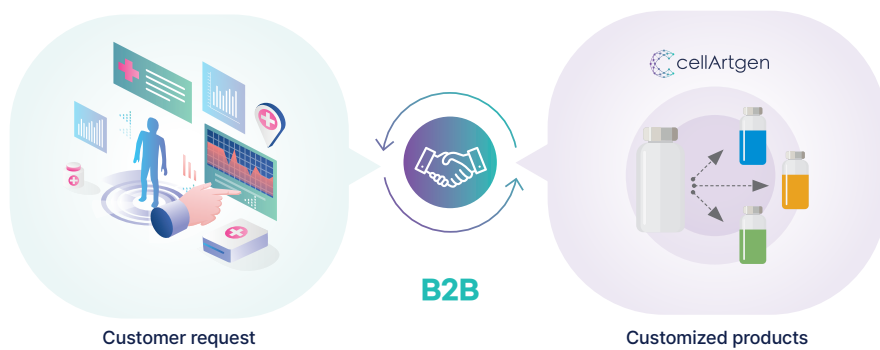
Product Applications



Ordering Information

Product Information		Product No.	Recommended Use			
			3D Cell Culture	2D Cell Culture	Cell and Tissue Transplantation	Media Supplement
Regenix™ Liver ECM	Low Concentration	RLI201, RLI210	✓	✓		✓
	Medium Concentration	RLI401, RLI410	✓		✓	
	High Concentration	RLI601, RLI610	✓			
Regenix™ Heart ECM	N/A	RHE201, RHE210	✓	✓		✓

Customizable



Customization services for ECM products not specified above are exclusively available for business-to-business (B2B) engagements.

Regenix™ Application Portfolio

Regenix™ offers a diverse array of applications tailored to organ-specific ECMs. Some of the data provided below was contributed by actual customers of Regenix™. Harness the power of organ-specific ECMs with Regenix™.

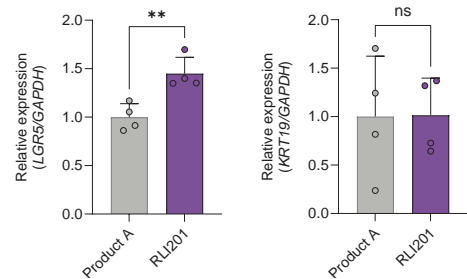
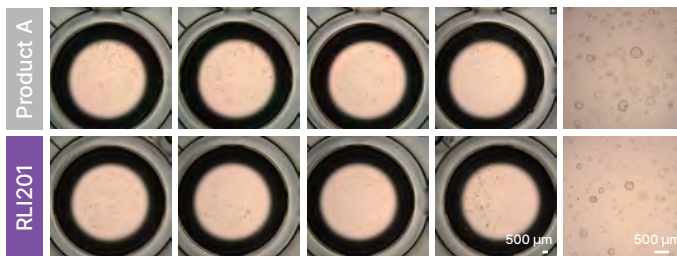
1) ECM hydrogel for 3D cell culture

Adult stem cell-derived organoid

Regenix™ is a strong alternative for human primary tissue organoid culture (*Nat Commun* 2022, 13, 1692).

Regenix™ Usage examples

- ▶ Product: Regenix™ Liver ECM, Low Conc. (RLI201)
- ▶ Cell: Human adult stem cell-derived liver organoids

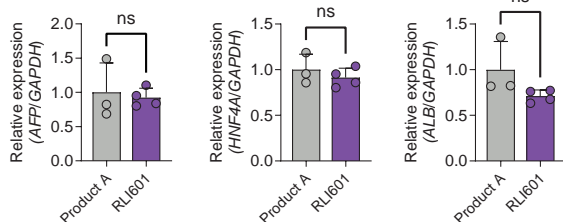
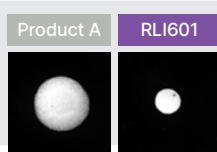


iPSC-derived organoid

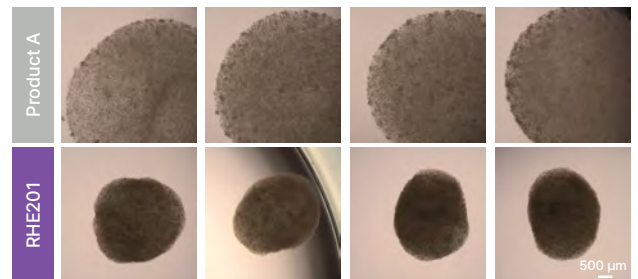
Regenix™ demonstrates remarkable effects on maintaining various cell types derived from iPSCs and promoting structural and functional maturation (*Nat Commun* 2024, 12, 2564).

Regenix™ Usage examples

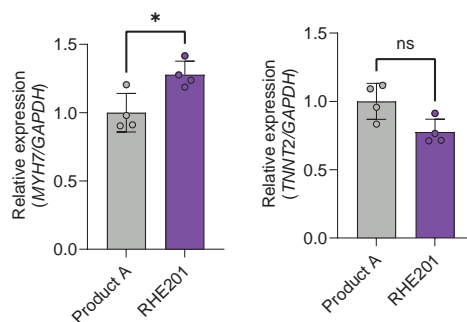
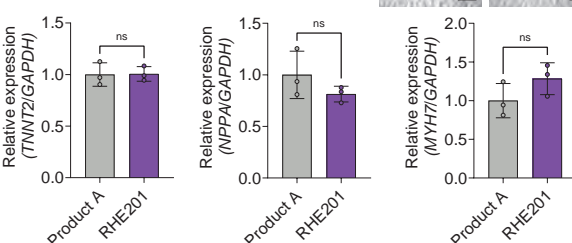
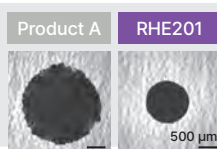
- ▶ Product: Regenix™ Liver ECM, High Conc. (RLI601)
- ▶ Cell: iPSC-derived liver bud organoid



- ▶ Product: Regenix™ Heart ECM (RHE201)
- ▶ Cell: iPSC-derived cardiomyocytes (NEXEL Cardiosight®-S, large; C-002)



- ▶ Product: Regenix™ Heart ECM (RHE201)
- ▶ Cell: iPSC-derived cardiomyocytes



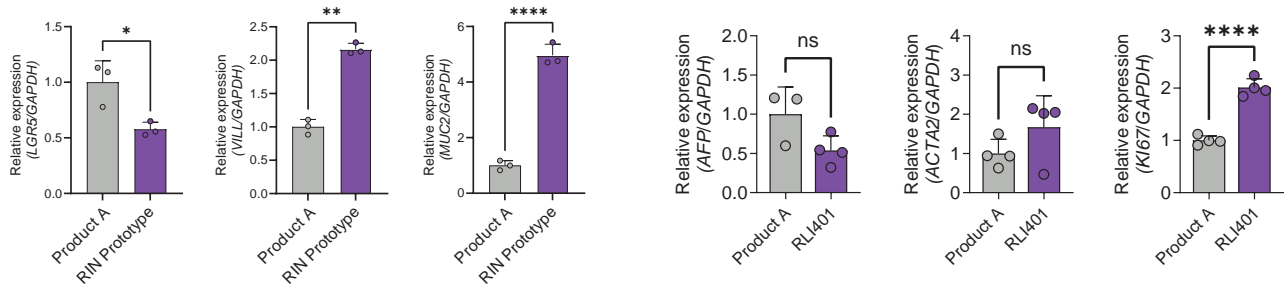
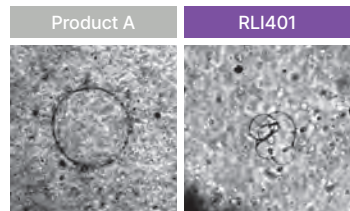
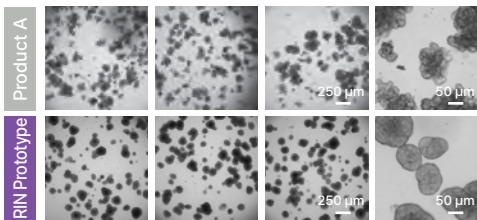
Cancer tissue-derived organoid (Tumoroid)

Explore tumoroid potential with Regenix™, designed for cultivating a variety of cancer tissue-derived organoids with promising early results.

Regenix™ Usage examples

- ▶ Product: Regenix™ Intestine ECM Prototype (RIN Prototype)
- ▶ Cell: Human colorectal cancer organoid

- ▶ Product: Regenix™ Liver ECM, Medium Conc. (RLI401)
- ▶ Cell: Human cholangiocarcinoma-derived organoid



References for the Regenix™ applications

Product A | **Regenix™**

Brain
Nat Biomed Eng 2018
Nat Commun 2021

Esophagus

Lung

Heart
Sci Adv 2022
Nat Commun 2024

Liver
Adv Func Mater 2018

Pancreas

Stomach
Nat Commun 2022

Kidney

Intestine
Nat Commun 2022

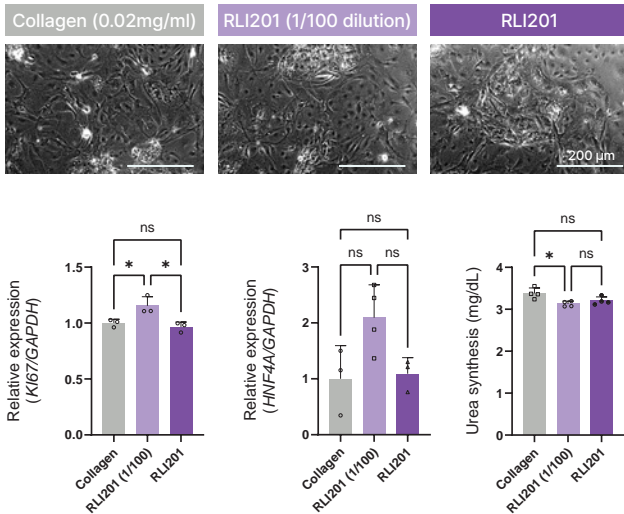
Endometrium

2) Substrate Coating Materials for 2D cell culture

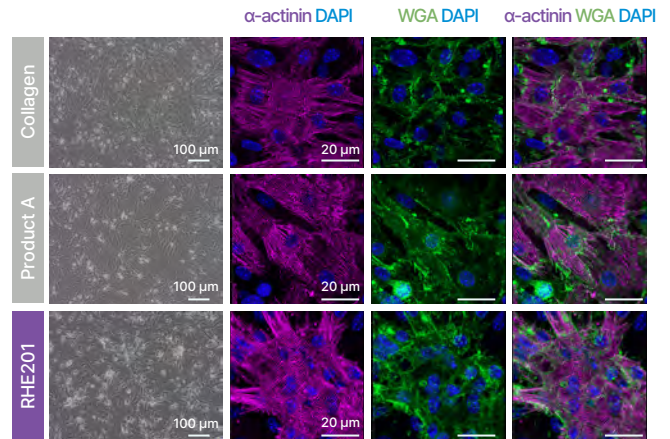
Regenix™ effectively coats various types of cell culture plates through simple methods
(*Biomacromolecules* 2014, 15, 1, 206–218).

Regenix™ Usage examples

- ▶ Product: Regenix™ Liver ECM, Low Conc. (RLI201)
- ▶ Cell: iPSC-derived hepatic endoderm cell



- ▶ Product: Regenix™ Heart ECM (RHE201)
- ▶ Cell: Mouse neonatal cardiomyocyte

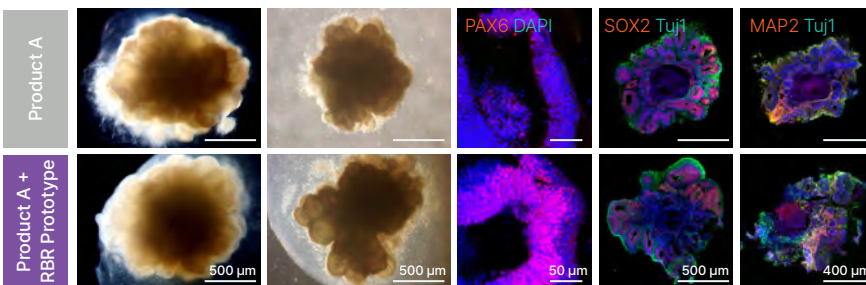


3) Media Supplement for cell culture

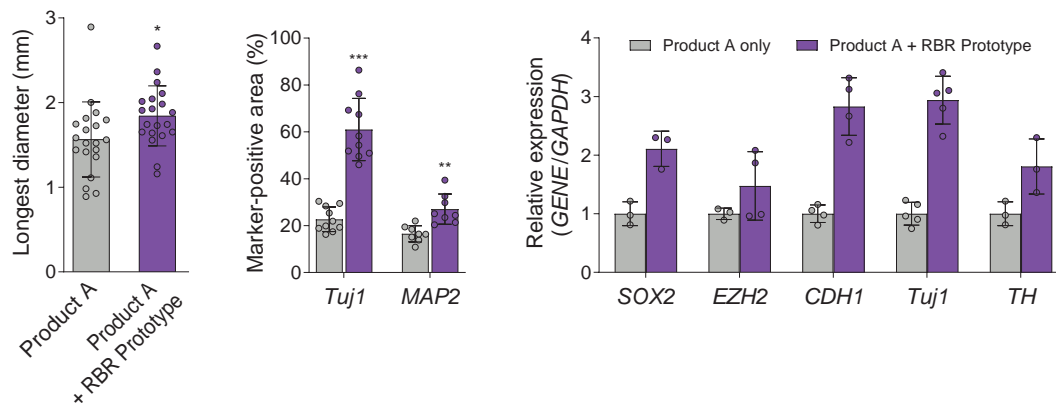
Regenix™ can increase the neuronal populations and enhance neuronal differentiation in organoids
(*Nat Commun* 2021, 12, 4730).

Regenix™ Usage examples

- ▶ Product: Regenix™ Brain ECM Prototype (RBR Prototype)
- ▶ Cell: iPSC-derived brain organoid



✓
We have confirmed that culturing iPSC-derived pancreatic islet organoids is also feasible using a similar approach.



4) Cell & Tissue Transplantation Materials for xenograft

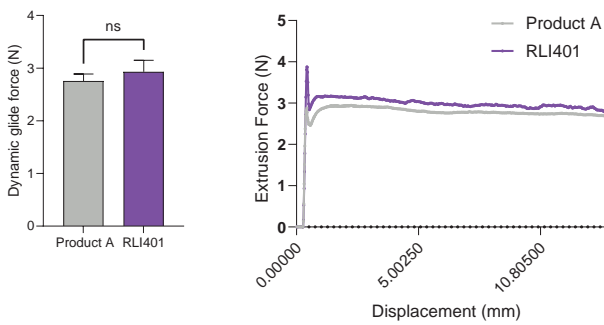
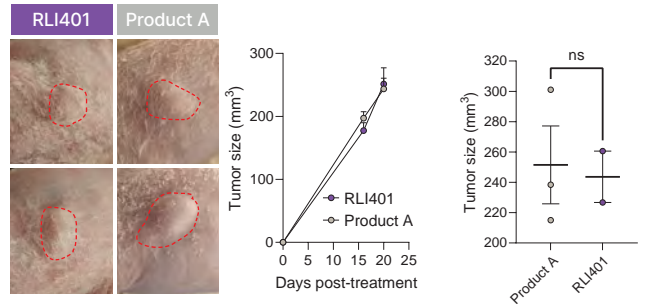
Regenix™ composed of atelocollagen, offers a biological safety advantage, with antigenic telopeptide region removed by enzymic degradation.

Regenix™ Usage examples

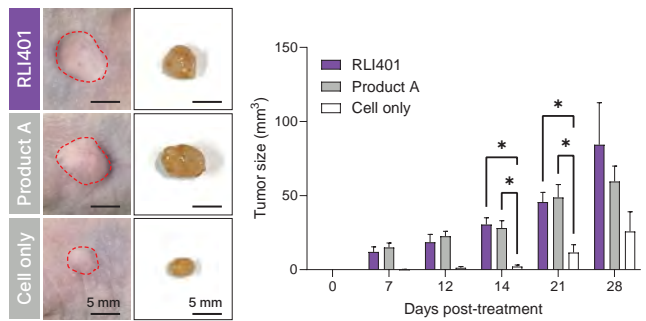
- ▶ Product: Regenix™ Liver ECM, Medium Conc. (RLI401)
- ▶ Syringe: [BD] Ultra-Fine™ insuline syringe, 29G x 12.7 mm, 1 mL



- ▶ Product: Regenix™ Liver ECM, Medium Conc. (RLI401)
- ▶ Cell: Human breast cancer cell



- ▶ Product: Regenix™ Liver ECM, Medium Conc. (RLI401)
- ▶ Cell: Human colon cancer cell



Product Safety Standards



Porcine-origin viruses and bacteria	Negative
Endotoxin	< 10 EU/mL
Sterility test	Negative
Mycoplasma test	Negative

Regenix™ exhibits excellent biocompatibility, making it highly suitable for various regenerative medicine and tissue engineering research applications.



For all inquiries related to our products and customization services,
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