



# Tissue-Specific ECMs for physiologic cell culture

## Products

**The cell environment matters.** Cell function is determined by biochemical and physical signals specific to cell and tissue type. Xylyx Bio products contain the full dynamic milieu of tissue-specific ECM components and thus provide the essential microenvironmental cues that underlie cell health and function. By bringing the native *in-vivo* environment to the *in-vitro* setting, Xylyx Bio's tissue-specific ECM substrates enable cell models that are significantly more predictive of human physiology than other cell culture substrates, thus accelerating scientific discoveries that benefit human life and health.

# Why tissue-specific ECM substrates?



## Biologically relevant

Xylyx Bio tissue-specific ECM substrates contain the full milieu of proteins and growth factors present in the native environment of the cell type of interest (e.g., liver ECM components for primary human hepatocytes).



## Clinically translatable

Xylyx Bio products facilitate downstream clinical translation because they contain tissue-specific extracellular matrix from ethically-sourced porcine or human tissues.



## Diverse applications

Xylyx Bio ECM substrates enhance research across multiple fields, including drug discovery, toxicology testing, bioprinting, organ-on-a-chip, cancer research, tissue engineering, regenerative medicine, and more.



## More accurate results

Xylyx Bio ECM substrates provide ideal conditions for maintaining cell phenotype, leading to enhanced *in-vitro* models and more accurate and physiologically relevant results compared to other cell culture substrates.



## Standardized experiments

Xylyx Bio products demonstrate consistent composition profiles across different lots, resulting in standardized experiments and reproducible results.



## Multiple product formats

Xylyx Bio tissue-specific 2D NativeCoat™ ECM Coatings and 3D TissueSpec® ECM hydrogels and custom scaffolds provide versatility to meet multiple research needs.

# 2D Cell Culture

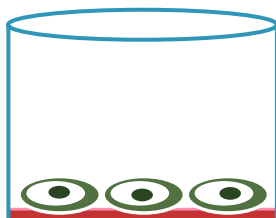
Fundamental biological questions continue to be solved using 2D models. Xylyx Bio offers NativeCoat™ ECM Coatings, solubilized cell-specific ECMs that provide the full suite of extracellular matrix components to support more in-vivo-like cell phenotypes in 2D.

## NativeCoat™ ECM Surface Coatings



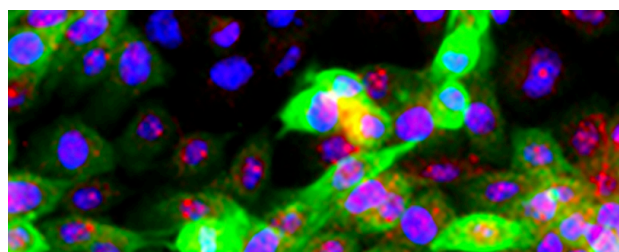
NativeCoat™ ECM Surface Coatings are derived from swine or human tissues and are rich with ECM components, including cell-specific adhesion and signaling molecules, matricryptic peptides, and growth factors.

NativeCoat™ ECM Surface Coatings are used to functionalize cell culture surfaces with tissue-specific factors that support cell attachment, phenotype maintenance, and function by providing a more physiologically relevant cellular microenvironment.



On surface coated with NativeCoat™ ECM

**NativeCoat™ ECM Surface Coatings enhance cell attachment and viability *in vitro***



Primary human bronchial epithelial (NHBE) cells show robust expression of lung epithelial cell markers - panKT (green) and Nkx2.1 (red) on NativeCoat™ Lung ECM.

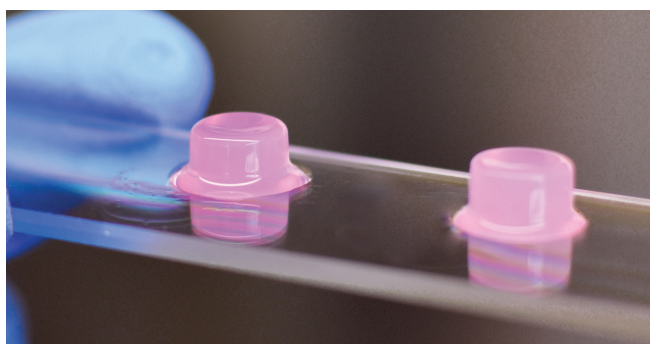
NativeCoat™ ECM Surface Coatings	Catalog #	Volume
Blood Vessel ECM	Custom	1mL
Bone ECM	MTSBN201	1mL
Cartilage ECM	MTSCT201	1mL
Colon ECM	Custom	1mL
Heart ECM	MTSHT201	1mL
Intestine ECM	MTSIN201	1mL
Kidney ECM	MTSKY201	1mL
Liver ECM	MTSLV201	1mL
Lung ECM	MTSLG201	1mL
Pancreas ECM	Custom	1mL
Skin ECM	MTSSK201	1mL
Stomach ECM	Custom	1mL



# 3D Cell Culture

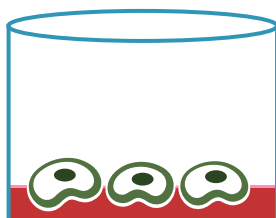
Xylyx Bio offers native tissue-specific ECM substrates that effectively recreate the 3D cell environment. TissueSpec® ECM Hydrogels provide a soft 3D culture medium, while custom TissueSpec® ECM Scaffolds also provide the integral tissue structure, architecture, and stiffness.

## TissueSpec® ECM Hydrogels

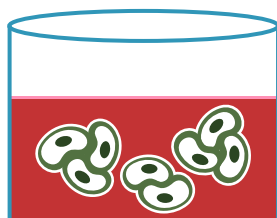


TissueSpec® ECM Hydrogels, derived from swine tissues, are soft, viscoelastic physiologic cell culture substrates that provide the full suite of collagens, laminins, and glycosaminoglycans specific to the cell or tissue of interest.

TissueSpec® ECM Hydrogels provide the most physiologically-relevant substrate for 3D cell culture, enhancing cell attachment and supporting normal cell growth and function with the complete milieu of ECM components present in natural tissues.

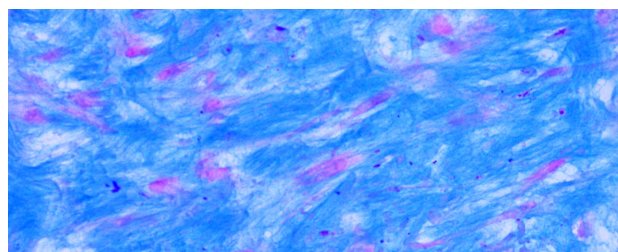


On thin TissueSpec®  
ECM Hydrogel



On thick TissueSpec®  
ECM Hydrogel

### TissueSpec® ECM Hydrogels enable scientific discoveries



Alcian blue staining of human mesenchymal stem cells showing differentiation and GAG expression (blue) in TissueSpec® Cartilage ECM Hydrogel.

TissueSpec® ECM Hydrogels	Catalog #	Volume
Blood Vessel ECM	Custom	1mL
Bone ECM	MTSBN101	1mL
Cartilage ECM	Custom	1mL
Colon ECM	Custom	1mL
Esophagus ECM	Custom	1mL
Heart ECM	MTSHT101	1mL
Intestine ECM	MTSIN101	1mL
Kidney ECM	MTSKY101	1mL
Liver ECM	MTSLV101	1mL
Lung ECM	MTSLG101	1mL
Muscle ECM	Custom	1mL
Pancreas ECM	Custom	1mL
Skin ECM	MTSSK101	1mL
Stomach ECM	Custom	1mL



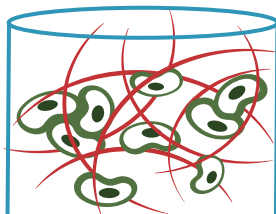
# 3D Cell Culture

## TissueSpec® ECM Scaffolds



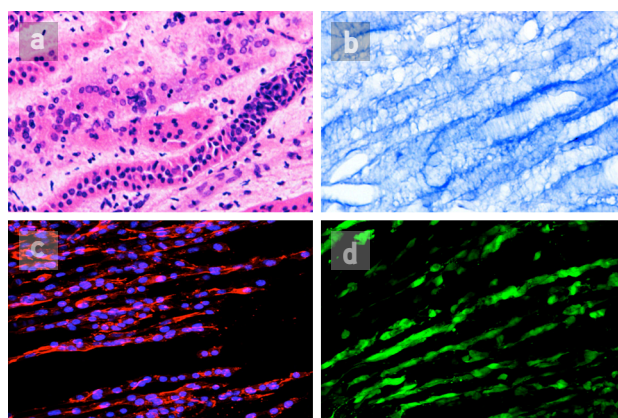
TissueSpec® ECM Scaffolds are produced from swine or human tissues to meet a wide range of size specifications and tissue-specific biophysical and mechanical properties. TissueSpec® ECM Scaffolds can also be isolated from specific regions within the tissue of interest.

TissueSpec® ECM Scaffolds provide the structural, mechanical and compositional cues of the endogenous tissue microenvironment and promote cell adhesion, proliferation, and functional organization for applications in 3D cell culture, drug discovery, tissue engineering, and more.



On TissueSpec® ECM Scaffold

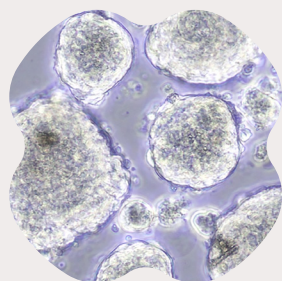
### TissueSpec® 3D ECM Scaffolds advance regenerative medicine research



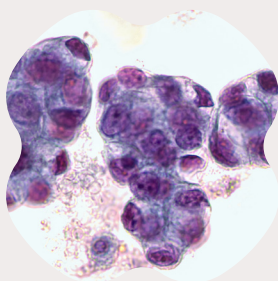
Histologic micrograph of native renal tubules (a). TissueSpec® Kidney ECM Scaffold showing acellular renal tubules (b). Rhodamine phalloidin (c) and Calcein AM (d) staining of mouse kidney stem cells cultured on TissueSpec® Kidney ECM Scaffold showing differentiation and functional organization into tubular structures.

TissueSpec® ECM Scaffolds	Catalog #	Volume
Blood Vessel ECM	MTSBV300	Custom
Bone ECM	MTSBN300	Custom
Cartilage ECM	MTSCT300	Custom
Colon ECM	MTSCO300	Custom
Esophagus ECM	MTSES300	Custom
Heart ECM	HTSHT300	Custom
Intestine ECM	MTSIN300	Custom
Kidney ECM	MTSKY300	Custom
Liver ECM	MTSLV300	Custom
Lung ECM	MTSLG300	Custom
Muscle ECM	MTSMK300	Custom
Pancreas ECM	MTSPC300	Custom
Skin ECM	MTSSK300	Custom
Stomach ECM	MTSST300	Custom

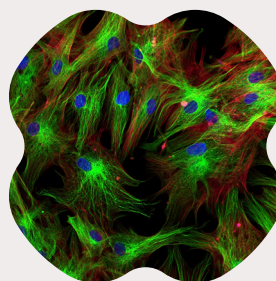
# Applications



**3D cell culture**



**Cancer research**



**Stem cell research**



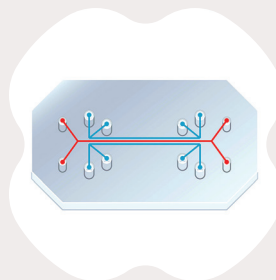
**Tissue engineering**



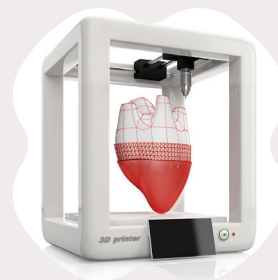
**Clinical applications**



**Drug screening**



**Organ-on-a-chip**



**3D Bioprinting**

## Custom Orders

Xylyx Bio offers custom NativeCoat™ and TissueSpec® ECM products from additional organs, tissue types, and tissue sources.

Tell us about your project, and we will meet your needs using our latest technology.

## Contact

**For additional information**

🌐 [xylyxbio.com](http://xylyxbio.com)

✉ [info@xylyxbio.com](mailto:info@xylyxbio.com)

📞 (212) 689-9005

760 Parkside Avenue  
Brooklyn, New York 11226

NativeCoat™ and TissueSpec® matrix products are quality control tested for the absence of bacteria, fungi, and mycoplasma. Porcine tissue sources are routinely screened for pathogens via herd health monitoring program.

For research use only. Not for use in diagnostic or therapeutic procedures.

**XYLYX**  
[xylyxbio.com](http://xylyxbio.com)