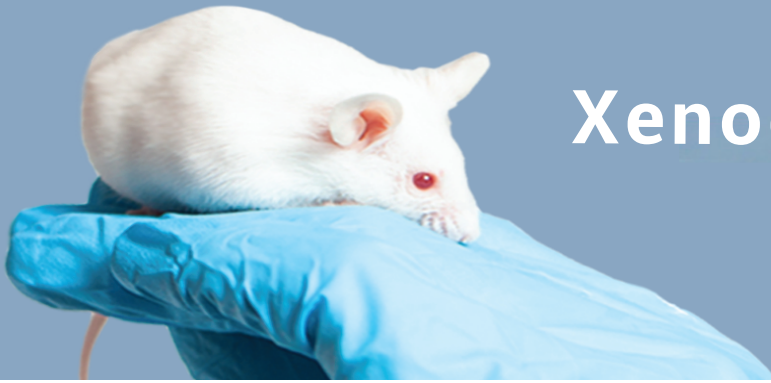


# Xenograft Applications

# VitroGel®

## for PDX & CDX



VitroGel® xeno-free hydrogels are excellent for injection and a superior alternative to animal-based or plant-based extracellular matrices (ECM) for patient-derived or cell-derived xenograft (PDX & CDX) applications. By avoiding the uncertainty of unknown components from animal-based ECM, VitroGel hydrogels give well-defined - and full control of the - microenvironment for consistent results.

## Superior Hydrogel Properties for Injection

### VitroGel®

Ready-to-use. User-friendly setup and protocols at room temperature.



100% animal origin-free. Reproducible assays with no lot-to-lot variation.



Maintains injectability for hours at room temp. Can prepare samples in large volumes.



Extremely smooth for injection and excellent cell retention after injection.



Full control of the ECM supplements. Biodegradable and supports cell activities.



V.S.

### Matrigel®



Requires cold temperature for setup and operation. Not user-friendly.



Animal-based with undefined compounds. Lot-to-lot variation.



Crosslinking is temperature sensitive. Samples need to be prepared in small volumes.



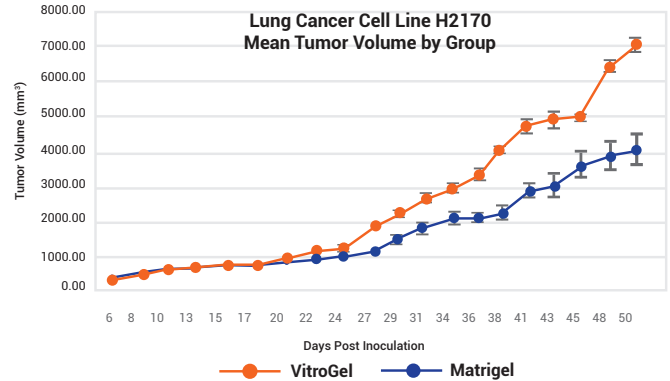
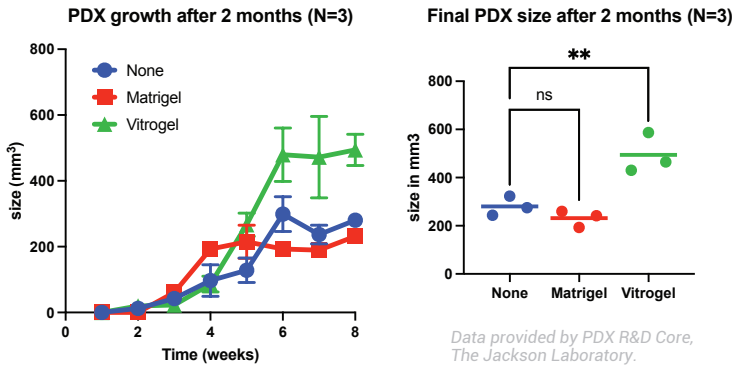
Requires quick injection. Temperature fluctuation can cause needle clogging.



> 2,000 undefined compounds which can interfere with accurate tumor growth.

# Fast Cell Growth Kinetics

SUPPORTS A WIDE RANGE OF CELL TYPES



## PDX VitroGel vs Matrigel: PDX Lung Cancer Tissue Fragments

VitroGel shows better tumor growth and tumor size over Matrigel for PDX lung cancer tissue fragments. The PDX R&D Core at The Jackson Laboratory comments on the consistency and smooth operational use with VitroGel with the mouse not showing darkening or bruising at the injection site as opposed to Matrigel.

## CDX VitroGel vs Matrigel: CDX Lung Cancer Cell Line H2170

Human-derived cancer cell line (H2170 lung cancer cells) were mixed with VitroGel and Matrigel respectively, and xenografted into Hera BioLabs' SRG Rat model for comparison. VitroGel can support the growth of xenografted human lung cancer tissue at least as well as Matrigel in a rodent host.

## Table of Cells Using VitroGel for Xenograft Applications

Tissue Types	Cell Name	VitroGel Types	Inject Side	Time	Tumor Formation Rate	Tumor Size
Breast Cancer	Hs578T	VHM01, TWG003	Subcutaneous Injection	4-6 weeks	100%	20 mm
Breast Cancer	MDA-MB-231	VHM01, TWG003	Subcutaneous Injection & Tail Vein	4-6 weeks	100%	20 mm
Breast Cancer	EMT6 Murine Mammary Carcinoma Cells	VHM01	Balb/C Mammary Fat Pad Injection	Not Disclosed	90%	Not Disclosed
Human Oral Cavity	HSC-2 Squamous Cancer Cells	VHM01	Subcutaneous Injection	2-3 weeks	100%	10-15 mm
Human Tongue	CAL-27 Squamous Cancer Cells	VHM01	Subcutaneous Injection	2-3 weeks	100%	15-25 mm
Human Fibrosarcoma	HT1080	VHM01	Subcutaneous Injection	4 weeks	100%	30-40 mm
Human Renal Cancer	786-O	VHM01	Subcutaneous Injection	8 weeks	100%	25 mm
Lung Cancer	ODX Lung Cancer Tissue Fragments	VHM01	Subcutaneous Injection	8 weeks	100%	500+ mm <sup>3</sup>
Lung Cancer	H2170 Lung Cancer Cells	VHM01	Subcutaneous Injection	7 weeks	100%	12,000+ mm <sup>3</sup>
Lung Cancer	H1975 Cells	VHM01	Subcutaneous Injection	Not Disclosed	100%	Not Disclosed
Melanoma	B16-OVA M04 Mouse Melanoma Cells	VHM01	Subcutaneous Injection	7-9 days	>70%	5-7 mm
Melanoma	B16-F10	VHM01, VHM04-4	Subcutaneous Injection	3 weeks	100%	10-15 mm
Prostate Cancer	Mouse Prostate Cancer Cells	VHM01	Subcutaneous Injection	7-9 days	100%	5-7 mm
Prostate Cancer	PC3 Prostate Cancer Cells	VHM01	Subcutaneous Injection	6 weeks	100%	12,000+ mm <sup>3</sup>

VHM01=VitroGel Hydrogel Matrix | TWG003=VitroGel RGD | VHM04-4=VitroGel ORGANOID-4

The list is constantly growing. Please contact support if you do not see an interested cell type not listed. [support@thewellbio.com](mailto:support@thewellbio.com)  
For more information visit [www.thewellbio.com/xenograft-injection](http://www.thewellbio.com/xenograft-injection)