VitroGel® High-Concentration Cell Invasion Assay Kit (Tunable)

TheWell BIOSCIENCE

Your gateway for easy-to-use and consistent in-depth cell invasion studies.

~30 MIN Room temperature protocol. No ice bucket required.

Room temperature stable protocol that can be completed in 30 minutes and can be adapted to laboratory automation.

Consistent results

No batch-to-batch variability. A defined system without unknown protein composition to ensure robust results.

Premium inserts for excellent image quality

The kit includes our premium VitroPrime™ Cell Culture inserts with even pore sizes allowing more accurate and consistent invasion and migration studies.

Full control of the ECM

Tunable hydrogels allows adjustment of hydrogel strength, binding ligand, degradability, and supplement compositions to study the microenvironment's influence on cell mobility.

Support barrier models

The system can be used to create *in vitro* complex microenvironment models.

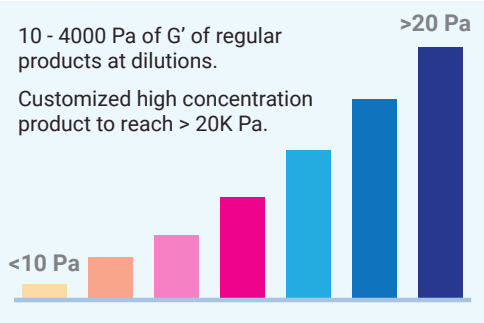
Premium inserts for accurate evaluation

The membrane does not stain when performing common staining for imaging (i.e., crystal violet).

The **VitroGel® High-Concentration Cell Invasion Assay Kit** (powered by the tunable VitroGel® High-concentration hydrogels) offers unmatched flexibility, allowing researchers to fully customize the hydrogel matrix—adjusting mechanical strength, binding ligands, and ECM components.

The kit includes our high-quality VitroPrime™ Cell Culture Inserts, allowing more accurate and consistent invasion and migration studies than animal-based ECM. No other product enables such a deep exploration of cell mobility and invasion studies, providing researchers with the precision and control needed to push the boundaries of their experiments like never before.

Tunable hydrogel strength



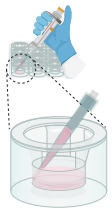
Learn more about **VitroGel® High-Concentration Cell Invasion Assay Kits (Tunable)**

thewellbio.com/product/tunable-vitrogel-cell-invasion-assay-kit/

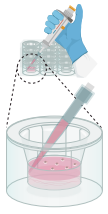
Work confidently at room temperature. No ice bucket and no cross-linking agent required.

Cell invasion culture process in 30 minutes.

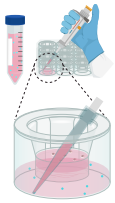
1. Mix VitroGel® hydrogel with cell medium at a 2:1 ratio. Combine hydrogel with cell medium.



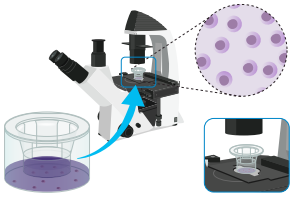
2. Seed hydrogel mixture to the insert. Wait for 20 min.



3. Seed 100 µL of the cell suspension on top of the insert.



4. Pipette 500 µL of medium + factors of interest to the outer well.



5. Evaluate invasion/migration using crystal violet staining.

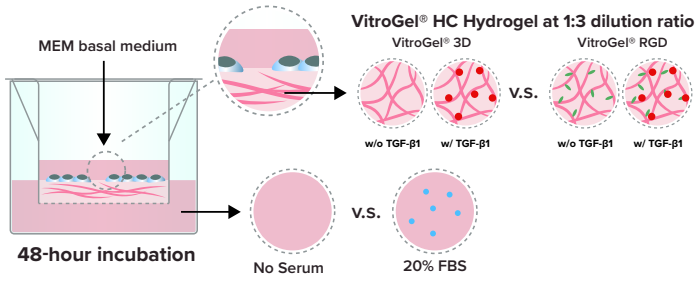
	Operation temperature	Set up time	Consistent results	Control compounds of outer well	Control key compounds in hydrogel	Control mechanical strength of hydrogel	Study functional ligands of hydrogel	Control hydrogel degradation	High-throughput / Lab automation	Study the effects of cytokine within the hydrogel matrix on cell mobility
HC VitroGel®-Based Cell Invasion Assay	Room temperature	30 mins	✓	✓	✓ VITROGEL UNIQUE	✓ VITROGEL UNIQUE	✓ VITROGEL UNIQUE	✓ VITROGEL UNIQUE	✓	✓ VITROGEL UNIQUE
Traditional assay with Animal-Based ECM	2-8 °C	2 hours +	–	✓	–	–	–	–	–	–

VITROGEL UNIQUE **Unique Application to VitroGel®.** With VitroGel®-Based Cell Invasion Assay Kits, not only you can perform traditional invasion/migration assays but go beyond to study more types of invasion/migration studies.

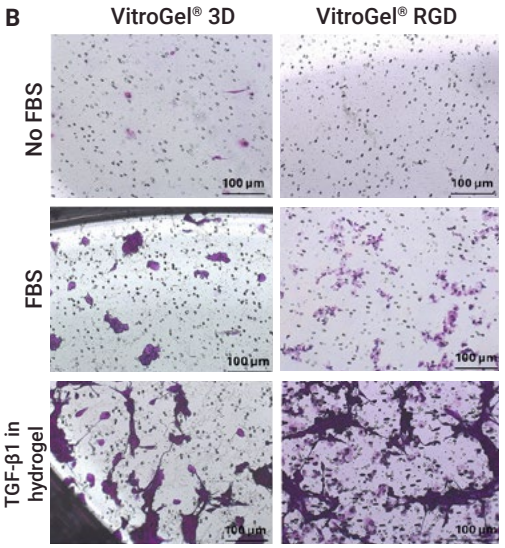
Study the effect of both cytokine and the functional ligands of hydrogel matrix on cell mobility

A

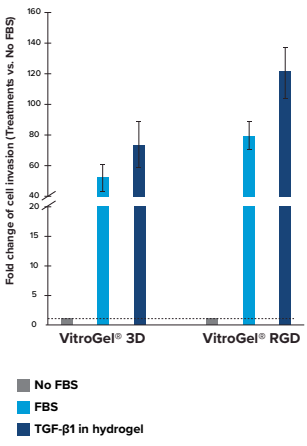
EXPERIMENTAL SET-UP



B



C



TGF-β1 inside VitroGel® 3D and VitroGel® RGD facilitates U87-MG glioblastoma cell invasion. A. Visual representation of experimental setup. Cultures were incubated for 48 hours B. Microscopy images demonstrating U87-MG glioblastoma cell invasion through VitroGel® 3D and RGD. Each hydrogel was diluted with VitroGel® Dilution Solution in a 1:3 ratio and then combined with MEM 1X or MEM 1X with TGF-β1 (30 ng/mL) in a 4:1 ratio. Images were obtained with a Zeiss microscope at a 10X magnification. C. Fold change of cell invasion in the TGF-β1 in hydrogel and FBS groups relative to the No FBS group for each hydrogel. The No FBS group was normalized to 1.

Catalog No.	Kit Contents: Hydrogel Type	Hydrogel Qty (1 mL)	Qty of 10 mL VitroGel® Dilution Solution TYPE 2	Qty of 8 µm VitroPrime™ Cell Culture Inserts
IA-HC001-1P	VitroGel® 3D	1	1	12
IA-HC001-4P		4	1	48
IA-HC003-1P	VitroGel® RGD	1	1	12
IA-HC003-4P		4	1	48
IA-HC007-1P	VitroGel® IKVAV	1	1	12
IA-HC007-4P		4	1	48
IA-HC008-P	VitroGel® YIGSR	1	1	12
IA-HC008-4P		4	1	48
IA-HC009-1P	VitroGel® COL	1	1	12
IA-HC009-4P		4	1	48
IA-HC010-1P	VitroGel® MMP	1	1	12
IA-HC010-4P		4	1	48

Application

Explore different invasion methods with VitroGel® system

thewellbio.com/applications/functional-assay/cell-invasion-assay/

Related Product

VitroGel® Cell Invasion Assay Kit (Ready-to-Use)

A simple and easy replacement for animal-based ECM for consistent cell invasion studies.

thewellbio.com/product/vitrogel-cell-invasion-assay-kit/

Explore our End-to-end Xeno-Free Platform for 3D Cell Culture

VitroGel® Xeno-Free Hydrogels | **CytoGrow®** Premium Growth Factors | **RocketCell™** Xeno-Free Media | **VitroPrime™** Culture Vessels | **VitroGel®** Recovery Solution | **Cyto3D®** Reagent for 3D Cell Analysis

TheWell BIOSCIENCE
3D Cell Culture and Beyond

866-3D-CELLS (973.855.4955) info@thewellbio.com thewellbio.com thewell-bioscience

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