VitroGel® NEURON

TheWell BIOSCIENCE

Ready-to-use, xeno-free hydrogel for neural stem cell and neuron cultures.

Xeno-free/Synthetic

100% animal/human origin-free, synthetic, biofunctional hydrogel system.

Support NSC & neuron cultures

Suitable for 3D and 2D culture of immortalized neuronal neuroblasts and iPSC-derived NSCs and neurons.

Stable at room temperature

Easy-to-use system with room temperature operation. No ice bucket or chilled pipette tips required.

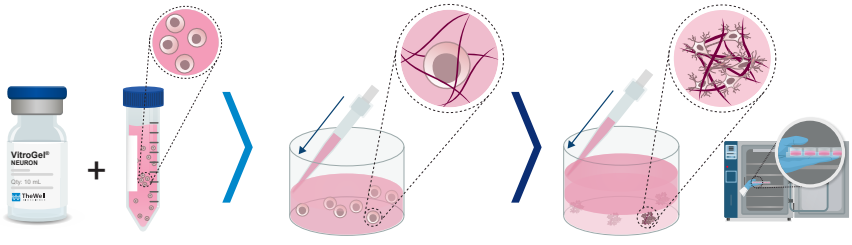
Efficient for single cell neurosphere cultures

Supports culturing of neural stem cells (NSCs) as single cells or neurospheres.

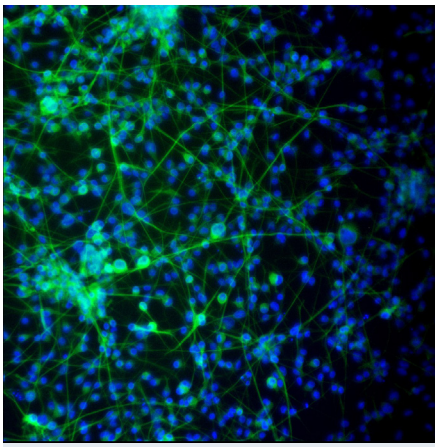
VitroGel® NEURON hydrogel is a synthetic matrix with functional ligands that support the culture of neuronal neuroblasts, mature neurons, and iPSC-derived neural stem cell (NSC) maintenance and differentiation. The hydrogel can be used for 2D and 3D cell culture applications.

VitroGel® NEURON hydrogel is a ready-to-use, xeno-free, transparent, and room temperature stable system, compatible with imaging systems and suitable for laboratory automation and clinical applications. VitroGel® NEURON hydrogel polymerizes once the solution is combined with the medium. Growth factors can be mixed with the matrix or added on top of the gel to support NSC cultures.

Simple Easy Workflow



1. Mix VitroGel® hydrogel with cells in a 2:1 ratio.
2. Transfer to culture plate and wait 30 minutes.
3. Add cover medium and incubate.

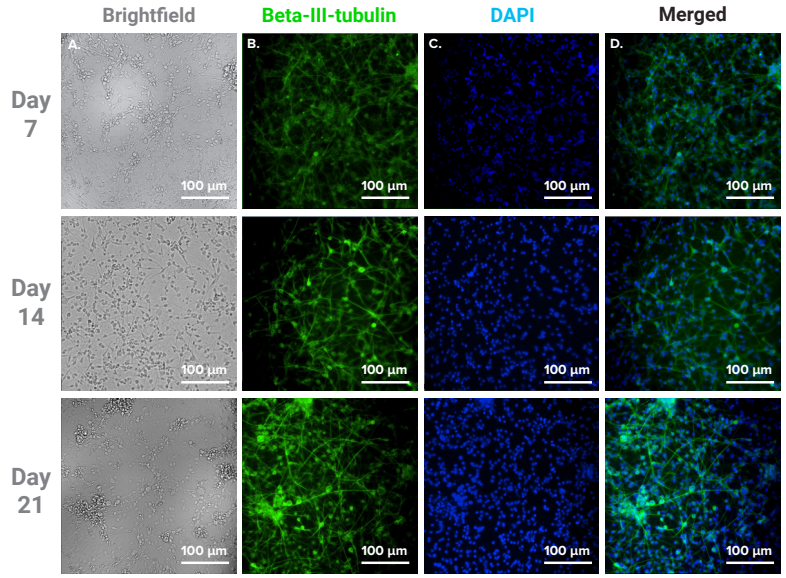


2D "Blanket" method using VitroGel® NEURON hydrogel sustains *in vitro* neuronal differentiation.

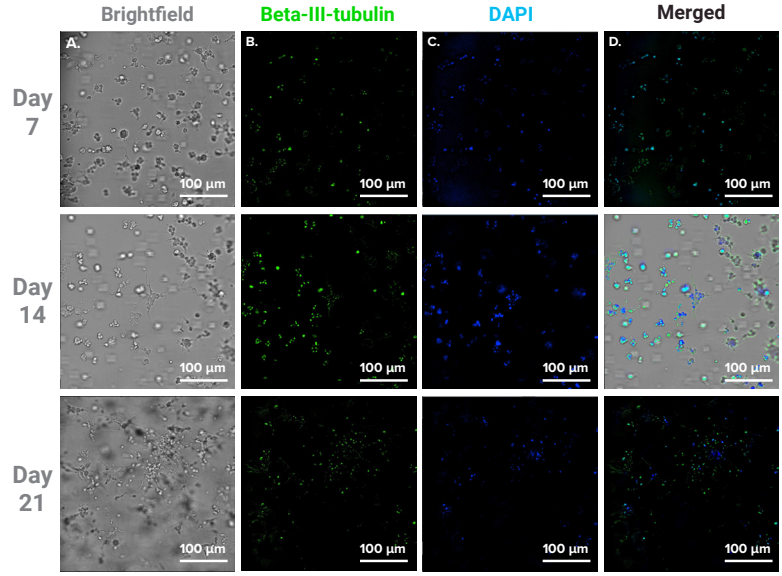
Immunofluorescence staining of B35 neuronal cultures was performed to evaluate the presence of the neuron-associated marker beta-III-tubulin on day 21 post-differentiation induction.

Combination of Green-fluorescent image illustrating the presence of beta-III-tubulin and the nuclei were observed using DAPI (blue) staining. The cultures were visualized using Molecular Devices ImageXpress Nano system at a 20X magnification.

Data and References

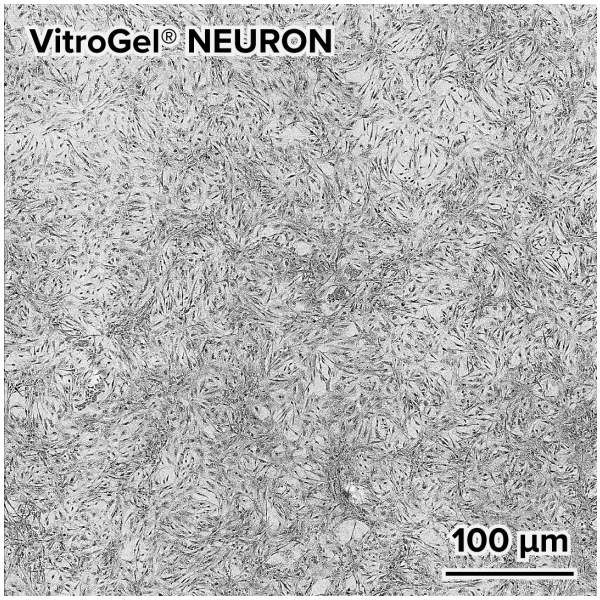


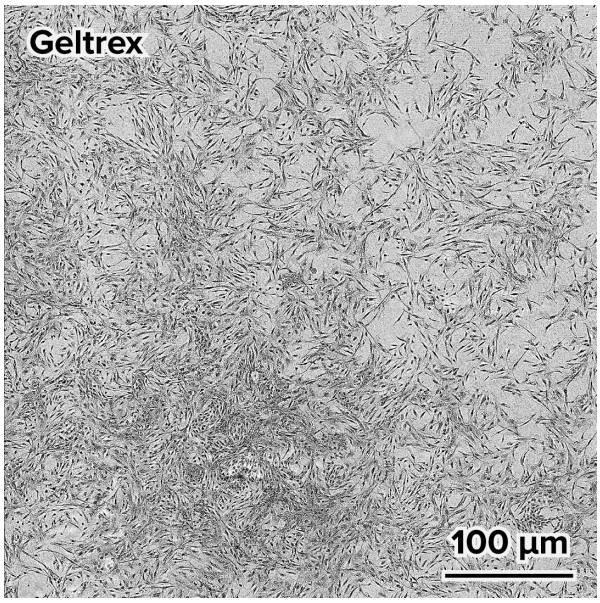
2D "Blanket" method using VitroGel® NEURON hydrogel sustains *in vitro* neuronal differentiation. Immunofluorescence staining of neuronal cultures was performed to evaluate the presence of the neuron-associated marker beta-III-tubulin on days 7, 14, and 21 post-differentiation induction. **A.** Light microscopy image showing neuronal cultures. B. Green-fluorescent image illustrating the presence of beta-III-tubulin. **C.** The nuclei were observed using DAPI (blue) staining. **D.** Combination of B and C images. The cultures were visualized using Molecular Devices Image Xpress Nano system at a 20X magnification.



VitroGel® NEURON sustains long-term 3D neuronal differentiation Immunofluorescence staining of neuronal cultures for the neuron-specific marker beta-III-tubulin on days 7, 14, and 21 post-differentiation induction. Images represent the following: **A.** Light microscopy image of neuronal cultures. **B.** Beta-III-tubulin presence, indicative of positive neuronal differentiation. **C.** Nuclei staining using DAPI (blue). **D.** Merged images of B and C, including A for D14. Images were obtained using Image Xpress Nano Imaging System from Molecular Devices at a 20X magnification.

Product	Cat No.	Size
VitroGel® NEURON	VHM07	10 mL
	VHM07S	2 mL





VitroGel® NEURON used as a thin 2D coating on VitroPrime™ Spread-Attach Plate for Growth of IPSC-derived NSCs. CD34-eIPSC-NSC cells were plated onto (50,000 cells per well) a 24-well VitroPrime™ Spread-Attach Plate coated with VitroGel® NEURON 1:200, or Geltrex, and grown for 6 days while being analyzed using an Incucyte system (S3). Pictures captured using Incucyte system, and brightfield images were enhanced using HDR and level function on Photoshop in order to highlight the contrast of the cells.

Learn more about

VitroGel® NEURON

www.thewellbio.com/product/neuron-culture-vitrogel/

TheWell BIOSCIENCE
3D Cell Culture and Beyond

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