



T-Blocks

Product information

Tissue Blocks

Tissue Blocks (T-Blocks) are porous hydrogel scaffolds with polarized microstructures that enable primary cells to attach, migrate, and proliferate after seeding. As primary cells require more surface area to grow, additional T-Blocks may be joined to the original T-Block seeded with cells. Cells will migrate and expand within additionally joined T-Blocks. T-Blocks can be used to maintain primary cell cultures without the need to sub-culture when cells become confluent. See **Table 1** for instructions on how to properly store T-Blocks.

Table 1. Contents and storage

Material	Amount	Storage	Stability
PEGDA	1 Sterile T-Block	<ul style="list-style-type: none">• 4 °C• Sterile Distilled H₂O• Protect from light	When stored as directed, product is stable for 30 days

* Note that vial contents are hardly visible.

Properties of T-Blocks

T-Blocks are porous hydrogel scaffolds that enable efficient growth of primary cells in 3D. T-Blocks are made out of biocompatible hydrogel compositions which include proprietary blends of polyethylene glycol diacrylate (PEGDA). T-Blocks coated with human extracellular matrix proteins facilitate attachment and migration of primary cell populations. T-Blocks are a platform by which the T-Block substrate can be expanded by joining additional T-Blocks to the original T-Block. This process facilitates migration and proliferation of primary cells, while maintaining the primary cell phenotype and eliminating the requirement of sub-culture.

Materials required, but not provided.

- Sterile image grade phosphate buffered saline (PBS), pH 7.4
- Primary cell population of choice
- Sterile Expansion media of choice
- Sterile Trypsin, 0.05% EDTA
- Sterile spatula
- Single channel pipettors
- Pipettor tips
- 50-mL Conical Tubes



Methods

Perform all procedures using aseptic technique unless otherwise noted.

Coating T-Blocks with Fibronectin

- Reconstitute fibronectin solution to a stock concentration of 1 mg/mL.
 - o Gently swirl the solution for 1 minute to mix.
 - DO NOT VORTEX
- Create a 5 µg/mL working fibronectin solution.
 - o Gently swirl the solution for 1 minute.
- Place T-Block in working fibronectin solution for 2 hours.
 - o Make sure the T-Block is completely submerged.
- Remove T-Block from working fibronectin solution with sterile spatula.
- Gently wash the T-Block with sterile PBS three times.

Seeding T-Blocks with primary cells and culturing (Non-tissue culture treated 6-well plate)

- Suspend primary cells of choice in media of choice at a concentration of 100,000 cells to 1,000,000 cells per mL, dependent on cell growth rate.
- Gently pipette 500 µL of cell solution onto top side of T-Block.
- Wait 5 minutes.
- Gently invert T-Block with sterile spatula to access opposite side of T-Block.
- Gently pipette 500 µL of cell solution onto top side of T-Block.
- Add 7-9 mL of media of choice to well containing T-Block.
 - o Add media against wall of well. DO NOT ADD media to top of T-Block after cells have been added.
 - o Ensure that T-Block is fully submerged.
- Check T-Blocks for confluency using an inverted microscope and change media every 2 days.
- When primary cells occupy approximately 60% of all cell surfaces within T-Block, join an additional T-Block to the original T-Block by sliding the tongue of new T-Block into a groove of original T-Block.
 - o If needed, carefully transfer T-Block to mono-plate before adding new T-Block to provide more cell culture volume.
 - o ALWAYS ensure at least one side of each T-Block is exposed to media when joining T-Blocks together to permit proper media diffusion.
- Continue culturing T-Blocks with preferred media.
 - o Ensure that enough media is added to fully submerge T-Block(s).
- Repeat process until desired cell concentration is reached.
- Follow standard trypsinization protocols for dissociating primary cells from T-Blocks when cells are needed for analysis.
- Dispose of used T-Block following standard biological hazardous wastes protocols mandated by institution, locality, state, and federal guidelines.



Ordering Information

Cat. No.	Product Name	Unit Size
PAT001	PEG T-Block.....	1 U
PAT002	PEG T-Block.....	4 U
PAT003	PEG T-Block.....	12 U
PAT004	PEG T-Block.....	24 U

Documentation and Support

Customer and Technical Support

Visit ronawk.com for the latest in services and support, including:

Contact telephone numbers

Product support, including:

- Product FAQs
- Training

Order and web support

Product documentation, including:

- User guides, manuals, and protocols
- Certificate of Analysis
- Safety Data Sheers (SDSs; also known as MSDSs)

Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

Limited Product Warranty

Ronawk LLC and/or its affiliate(s) warrant their product as set forth in the Ronawk LLC General Terms and Conditions of Sale found on the Ronawk LLC website at www.ronawk.com/products/termsandconditions.html. If you have any questions, please contact Ronawk LLC at ronawk.com/product/t-block/.

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