TissueSpec® Heart ECM Hydrogel

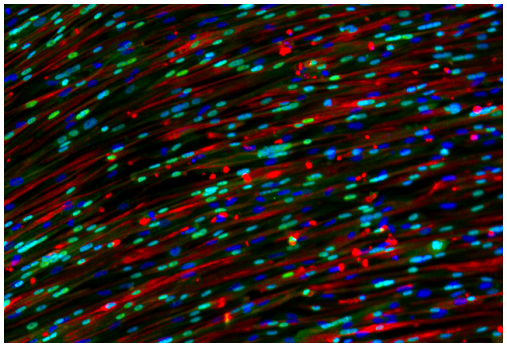
Catalog # MTSHT101

TissueSpec® Heart ECM Hydrogel is a versatile extracellular matrix product comprised of heart-specific collagens and other ECM molecules of porcine origin. TissueSpec® hydrogels provide cells (e.g., cardiomyocytes) a physiologic substrate for 3D cell culture that is easy to use and enhances cell function and cell-cell interactions.

Features

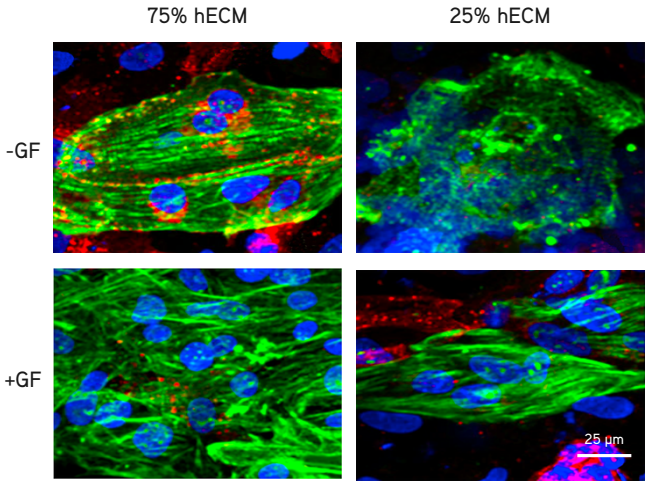
- Derived from porcine heart tissue
- Contains heart-specific ECM components
- Supports primary cell and organoid cultures
- Compatible with standard cell culture protocols
- Consistent across lots
- Easy to use

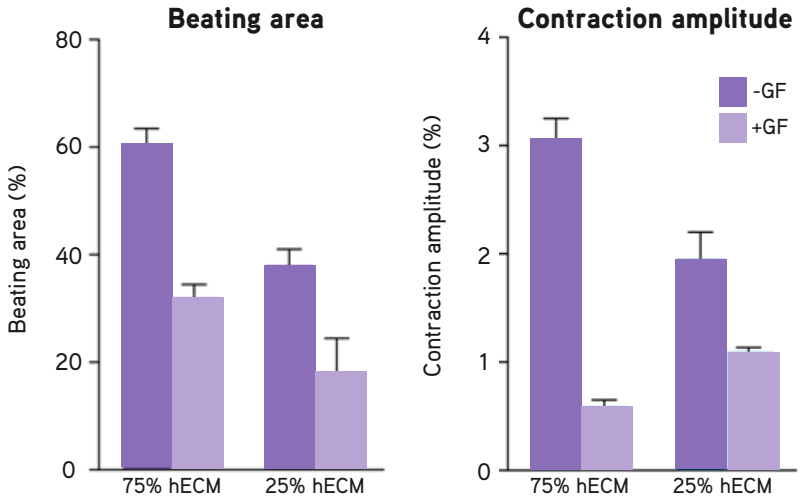
Applications in 3D cell culture



TissueSpec® Heart ECM Hydrogel can be used to differentiate stem and progenitor cells into cardiac cells and enhance cardiac structure formation and cellular function. To study cell-cell interactions or microtissue structures, encapsulate cells or organoids within 3D TissueSpec® Heart ECM Hydrogel.

TissueSpec® Heart ECM Hydrogel supports cardiomyocyte function





Human embryonic stem cell-derived cardiomyocytes differentiated in a percentage mixture of collagen type I and TissueSpec® Heart ECM Hydrogel (hECM) expressed significantly higher cardiac troponin I (green) and connexin 43 (red) in hydrogels enriched with heart-specific ECM components. Beating area and contraction amplitude also improved with higher percentage of heart ECM, especially in the absence of growth factors (GF). Duan et al., J Cardiovasc Trans Res (2011).