



TissueSpec® Skin ECM Hydrogel

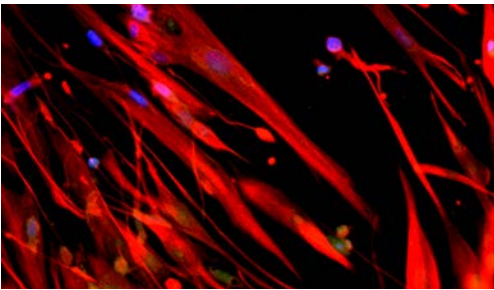
Catalog # MTSSK101

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

Features

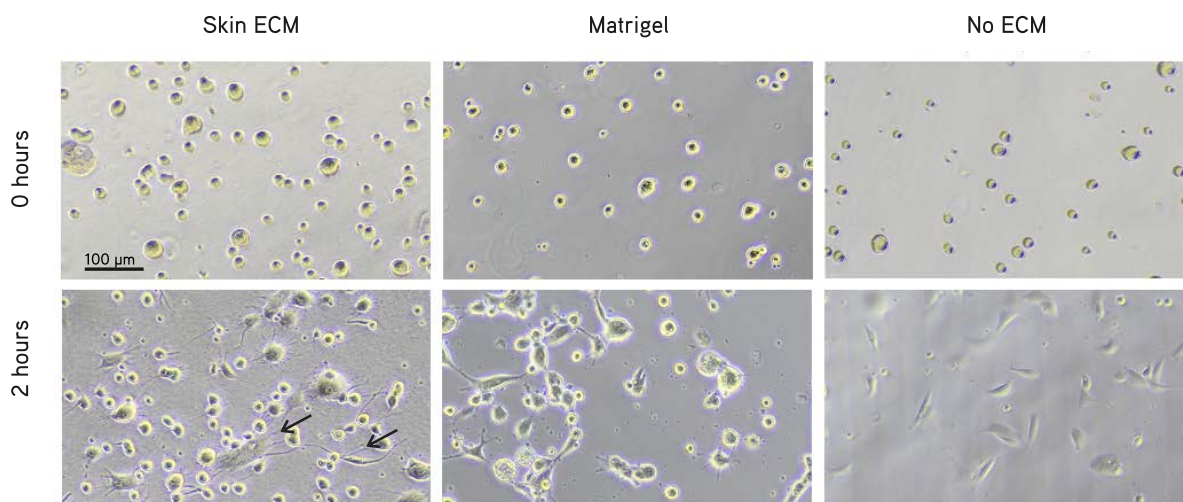
- Derived from porcine skin tissue
- Contains skin-specific ECM components
- Supports primary cell and organoid cultures
- Compatible with standard cell culture protocols
- Consistent across lots
- Easy to use

Applications in 3D cell culture



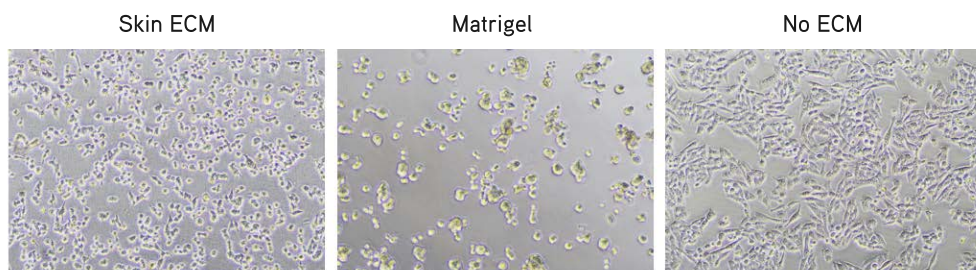
TissueSpec® Skin ECM Hydrogel can be applied as a thin gel to culture cells and study cellular activity. Cells interact with skin ECM and show skin-specific function. To study cell-cell interactions or microtissue structures, encapsulate cells or organoids within 3D TissueSpec® Skin ECM Hydrogel.

TissueSpec® Skin ECM Hydrogel supports cell adhesion



Normal dermal fibroblasts seeded on thin TissueSpec®Skin ECM Hydrogels **show adhesion and spindle-shape morphology with cytoplasmic extensions (black arrows) earlier** than fibroblasts in Matrigel or plastic (no ECM).

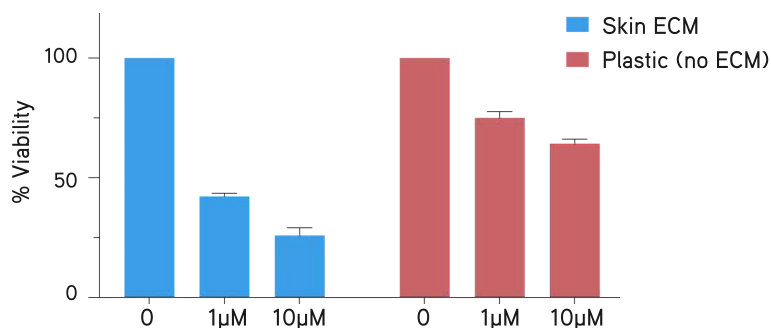
TissueSpec® Skin ECM Hydrogel supports cell morphology



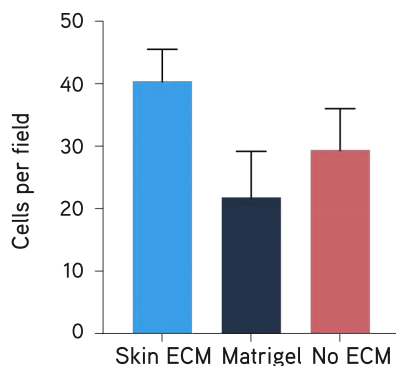
A375 cells seeded on thin TissueSpec® Skin ECM Hydrogels exhibit their regular morphology and similar confluence observed on plastic (no ECM).

TissueSpec® Skin ECM Hydrogel supports drug testing

Melanoma cells, A375, cultured in TissueSpec® Skin ECM Hydrogel show a more dramatic response to Vemurafenib 1uM and 10 uM compared to cells on plastic (no ECM) after 96 hours of treatment.



TissueSpec® Skin ECM Hydrogel induces cell migration



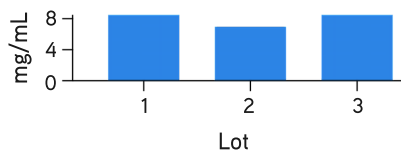
A375 cells show significantly different migration through transwell membrane (pores: 8 µm) to TissueSpec® Skin ECM Hydrogel in comparison to Matrigel and plastic (no ECM). Cells per field are the average of five high-power fields. Two-way ANOVA, $p < 0.05$.

TissueSpec® Skin ECM Hydrogel characteristics

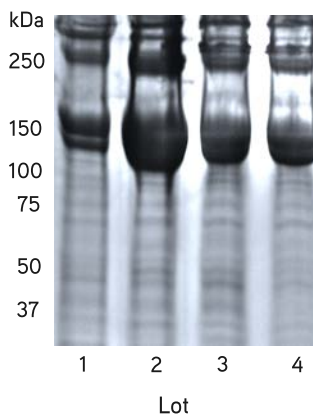
a Key components (µg/mL)

collagens (soluble)	7,000-10,000
elastin	2,400-2,800
glycosaminoglycans	100-150

b Collagen



c Electrophoresis



(a) Ranges of key skin hydrogel matrix components. (b) Collagen concentration and (c) gel electrophoresis demonstrate a consistent protein profile across multiple TissueSpec® Skin ECM Hydrogel lots.