bio-techne®

# Cultrex™ UltiMatrix RGF BME

## The choice Basement Membrane Matrix for 2D and 3D Cell Culture

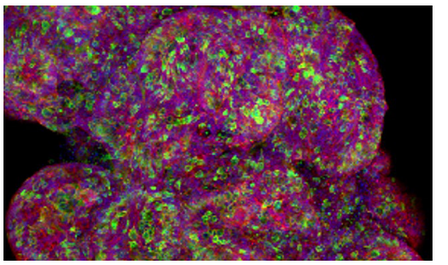
Cultrex UltiMatrix Reduced Growth Factor (RGF) Basement Membrane Extract (BME) is a soluble form of basement membrane that provides high tensile strength, enhanced levels of entactin/nidogen, elevated protein concentration, and robust clarity and purity. These compositional and protein concentration enhancements make Cultrex UltiMatrix RGF BME an ideal hydrogel matrix with proven efficacy in organoid cell culture, induced pluripotent stem cell expansion and differentiation, spheroid formation, and other 2D and 3D culture applications

### Key Benefits

- Consistent lot-to-lot performance
- Qualified for organoid and pluripotent stem cell culture
- Tensile strength optimized for 3D applications
- Verified for dome formation

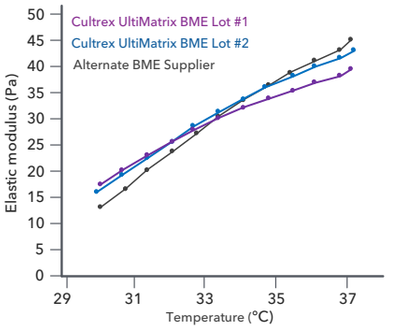
### Product Features

- High protein concentration (10-12 mg/mL)
- Enriched in entactin (> 8% of total protein)
- Reduced Growth Factor (RGF) formulation
- Low endotoxin profile (< 7 EU/mL)

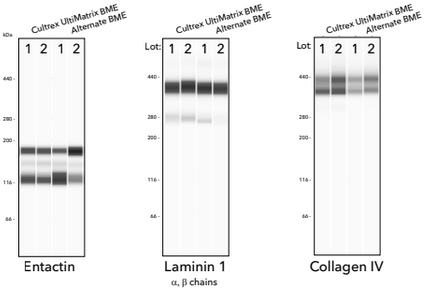


Human Descending Colon Organoid Cultured Using Cultrex UltiMatrix RGF BME.

| NAME | PROTEIN CONC. | SIZES | CATALOG # |
|---|---|---|---|
| Cultrex UltiMatrix Reduced Growth Factor Basement Membrane Extract | 10-12 mg/mL | 10 mL (2 x 5 mL) | BME001-10 |
| | | 5 mL | BME001-05 |
| | | 1 mL | BME001-01 |




**Consistent Tensile Strength and Gel Rates.** The tensile strength (elastic modulus) dymanics of Cultrex UltiMatrix RGF BME was compared to a popular commercial ECM matrix. The elastic modulus was measured at increasing temperatures to determine tensile strength and gelling rate. Similar tensile strength and gelling dynamics were observed across multiple lots of Cultrex UltiMatrix RGF BME and compared to an alternate BME supplier.




**Consistent Lot-to-Lot ECM Composition.** Simple Western analysis for Entactin, Laminin, and Collagen IV across two lots of both Cultrex UltiMatrix BME and a popular ECM. Cultrex UltiMatrix BME shows consistent expression of entactin, compared to the alternate BME.

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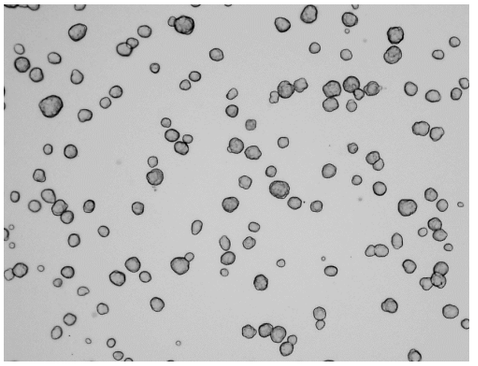
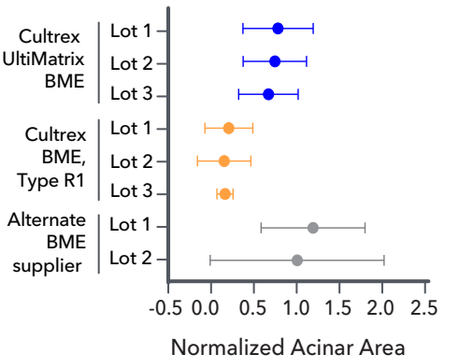
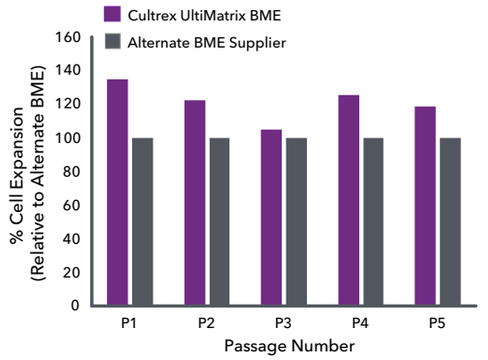
## Improved Spheroid Maturation and Consistency

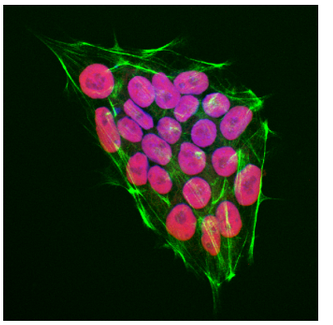





**Improved Spheroid Maturation and Consistency.** Acinar formation of MCF10A cells was compared following 12 days in culture using Cultrex UltiMatrix BME, Cultrex BME, Type R1 and an alternate commercial ECM matrix. Cultrex UltiMatrix BME showed increased acinar maturation (larger area) compared to Cultrex BME, Type R1 and more consistent acinar area compared to the alternate BME matrix supplier.

## Robust Induced Pluripotent Stem Cell Expansion



hiPSC Colony Cultured using Cultrex UltiMatrix BME

**Cultrex UltiMatrix RGF BME Supports Human iPSCs.** Human iPSCs were passaged in 6 well plates (seeded at $7.5x10^5$ cells/well) using either Cultrex UltiMatrix RGF BME (purple) or an alternate commercial BME matrix (grey) as a substrate. At each passage cells were harvested and counted by hemocytometer. Cultrex UltiMatrix BME showed robust iPSC expansion compared to the normalized levels of the alternate matrix.

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