SIGMA-ALDRICH®

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Product Information

MaxGel™ ECM

Catalog Number **E0282**
Storage Temperature –70 °C

Product Description

Produced *in vitro*, MaxGel™ ECM (extracellular matrix) provides a rich three-dimensional environment to promote cellular proliferation. MaxGel ECM contains human extracellular matrix components including collagens, laminin, fibronectin, tenascin, elastin, and a number of proteoglycans and glycosaminoglycans. The cell culture derived human basement membrane extract (BME) effectively reproduces the cooperative interaction of epithelia and mesenchyme during development and in organotypic cell culture of skin. It promotes cell growth and migration, and has been shown to support the proliferation of many cell types, including human embryonic stem cells, neural stem cells, neurons, glia, astrocytes, fibroblasts, hepatocytes, and keratinocytes.

This cell culture derived human BME is not denatured nor chloroform sterilized. It provides for a more tissue-like environment, due to the non-denatured acid-soluble collagens, which form fibrils through a self-assembly process at neutral pH. MaxGel ECM is supplied as a ~1 mg/ml solution in Dulbecco's Modified Eagle's Medium (DMEM) with penicillin-streptomycin added and is compatible with all culture media.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

MaxGel is stable for >1 year when stored at –70 °C.

Procedure

Remove the product from the freezer, thaw at 2–8 °C or on ice just prior to use, and keep the product cold until coating.

Thin Coating Procedure

For monolayer culture or when a thin coating of BME is desired, dilutions of as high as 1:100 can be used. An empirically determined dilution should be performed depending on the particular application. Human embryonic stem cells and keratinocytes grow well when cultured on a 1:100 dilution of MaxGel ECM.

1. Dilute the BME in **cold** medium.
2. Plate the appropriate volume of the diluted BME solution in a tissue culture plate and allow it to incubate for 2–4 hours at 37 °C in a humidified 5% CO_2 incubator.
3. Carefully aspirate the remaining solution before plating cells.
4. Air-dry for 30 minutes at room temperature.
5. Plate cells as desired.

References

1. Maas-Szabowski, N. et al., Experimental models to analyze differentiation functions of cultured keratinocytes *in vitro* and *in vivo*. Methods Mol. Biol., **289**, 47-60 (2005).

MaxGel is a trademark of Sigma-Aldrich Co. LLC.

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