

## Product Information

### ECM Gel, Growth Factor Reduced, without Phenol Red from Engelbreth-Holm-Swarm mouse sarcoma

Catalog Number **E6909**

Storage Temperature  $-20\text{ }^{\circ}\text{C}$

#### Product Description

The ECM gel was prepared from Engelbreth-Holm-Swarm (EHS) sarcoma produced in mice, following a published procedure,<sup>1</sup> to a protein concentration of 7–9 mg/ml. ECM gel contains laminin as a major component, collagen type IV, heparan sulfate proteoglycan, entactin, and other minor components. It is treated with chloroform to prevent aerobic and anaerobic microbial growth. The ECM gel is further purified to reduce the level of growth factors.

The ECM Gel, Growth Factor Reduced was developed for applications requiring a further purified ECM. It provides a lower level of growth factors, allowing more control of the medium and better interpretation of results. In addition, the product is provided in a medium without phenol red, which may interfere with some analyses.

The ECM Gel, Growth Factor Reduced will undergo thermally activated polymerization (gelation) to form a reconstituted basement membrane at above  $\sim 12\text{ }^{\circ}\text{C}$ . The process of gelation is reversible. Addition of collagen type IV to ECM Gel, Growth Factor Reduced increases polymerization; whereas, addition of collagen type I, fibronectin, or heparin, does not.<sup>2</sup>

PC12 cells show neurite formation within 2 days when grown on a thin layer of ECM Gel, Growth Factor Reduced.

#### 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

Store the product at  $-20\text{ }^{\circ}\text{C}$  for long-term storage. ECM gel may be stored at  $2\text{--}8\text{ }^{\circ}\text{C}$  for up to 72 hrs.

#### Procedure

Thaw gel overnight at  $2\text{--}8\text{ }^{\circ}\text{C}$  before use (The gel may contain precipitates which do not influence its activity). Dispense the gel into wells of a multiwell plate using pre-cooled devices. For a 96 well plate, dispense  $50\text{--}100\text{ }\mu\text{L/well}$ . The ECM Gel, Growth Factor Reduced will gel within 5 minutes at  $20\text{ }^{\circ}\text{C}$ . For prolonged manipulations, work should be conducted below  $10\text{ }^{\circ}\text{C}$ .

Cells may be plated on top of a thin gel layer ( $0.5\text{ mm}$ ) or cultured inside a  $1\text{ mm}$  layer. In the latter application, cells should be added to the gel prior to plating at a recommended density of  $3\text{--}4 \times 10^4$  cells per ml.

#### References

1. Kleinman, H.K., et al., in *Molecular and Cellular Aspects of Basement Membranes*, Rohrbach, D.H., and Timpl, R., eds. *Academic Press*, 309-326 (1993).
2. Carey, D.J., et al., Schwann cell myelination: induction by exogenous basement membrane-like extracellular matrix. *J. Cell Biol.*, **102**, 2254-2263 (1986).
3. Taub, M., et al., Epidermal growth factor or transforming growth alpha is required for kidney tubulogenesis in matrigel cultures in serum-free medium. *Proc. Natl. Acad. Sci. USA*, **87**, 4002-4006 (1990).

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