Standard Basement Membrane Matrix, Phenol Red-free

(For Cell differentiation, migration, invasion, and angiogenesis)

Cat #: A-MGL06

Size: 5mL, 10mL

Storage: ≤-20°C

Product Description

Basement membranes are continuous sheets of specialized extracellular matrix that form an interface between endothelial, epithelial, muscle, or neuronal cells and their adjacent stroma. Basement membranes are degraded and regenerated during development and wound healing. They not only support cells and cell layers, but they also play an essential role in tissue organization that affects cell adhesion, migration, proliferation, and differentiation. Basement membranes provide major barriers to invasion by metastatic tumor cells.

Standard Basement Membrane Matrix, Phenol Red-free, is a soluble form of basement membrane purified from Engelbreth-Holm-Swarm (EHS) tumor. Standard Basement Membrane Matrix, Phenol Red-free, at 37°C to form a reconstituted basement membrane. The major components of Standard Basement Membrane Matrix, Phenol Red-free, include laminin, collagen IV, entactin, and heparin sulfate proteoglycan.

Intended Use

2D or 3D cultures related to cell proliferation or differentiation, as well as study of cell morphological, commonly used experiments are on cell invasion, angiogenesis and organoid culture, among others.

Product Parameter

1. Source: Mouse Tumor
2. Color: Phenol Red-containing Standard Basement Membrane Matrix is yellow-pink, and Phenol Red-free Standard Basement Membrane Matrix is translucent light yellow;

3. Form: Standard Basement Membrane Matrix dissolved at 4°C, a transparent liquid state; High concentration Standard Basement Membrane Matrix after 0°C solution, transparent liquid state, 4°C for a long time to show a semi-gel.
4. Concentration: Protein concentration ranges from 8 to 26 mg/mL
5. Endotoxin: ≤ 4.5 EU/ mL
6. Gel time: 5-30 min gel at room temperature, the speed of gel formation is accelerated when the temperature is from 22°C to 37°C.

Material Qualifications

- Routine screening of mouse colony pathogensby mouse antibody product (MAP) tests
- Testing for bacteria, fungi and mycoplasmato ensure negative results
- Extensive PCR testing for a variety of pathogens including LDEV to ensure strict control of raw materials used in the production process
- Extraction from LDEV-free mouse tumor cells
- Gel stability testing at 37°C for 14 days
- Detection of endotoxin levels using serological methods
- Biological function verification of each lot (organoid culture and differentiation experiments; Subcutaneous tumor formation test; Stem cell culture; Angiogenesis experiment etc.)

Coating Procedures

Thaw Standard Basement Membrane Matrix overnight at 2-8°C. Refrigerator temperatures may vary, therefore it is recommended to keep Standard Basement Membrane Matrix on ice in a refrigerator during the thawing process. Thawed Standard Basement Membrane Matrix solidifies quickly at temperatures above 15°C; when working with Standard Basement Membrane Matrix, keep it on ice to prevent untimely gelling.

There are many applications for Standard Basement Membrane Matrix which require different thicknesses and concentrations. A thick gel is needed for applications such as endothelial cell formation of capillary-like structures (Tube Formation Assay), the differentiation of rat aorta tissue into capillary-like structures (Aortic Ring Assay), epithelial

organoid formation, or tumor organoid formation. Some applications, such as propagation of primary cells, require a thin layer coating and not a thick gel; therefore, the thin layer method should be used.

Thick Gel Method:

1. Thaw Standard Basement Membrane Matrix as stated above.

2. Mix Standard Basement Membrane Matrix by slowly pipetting solution up and down; be careful not to introduce air bubbles.

3. Pipette 200-300 µL per cm^2 onto the growth surface.

4. Place coated object at 37°C for 30 minutes.

5. Coated objects are ready for use.

Thin Layer Method (non-gelling):

1. Thaw Standard Basement Membrane Matrix as stated above.

2. Mix Standard Basement Membrane Matrix by slowly pipetting solution up and down; be careful not to introduce air bubbles.

3. Dilute Standard Basement Membrane Matrix to desired concentration in cold serum-free medium. A 1:100 dilution is recommended for the propagation of primary cells. Empirical determination of the optimal coating concentration for your application may be required.

4. Add a sufficient amount of solution to cover the entire growth surface area. A volume of 300 µL per cm^2 is recommended.

5. Incubate coated object at room temperature for one hour.

6. Aspirate coating solution and immediately plate cells. Do not allow coated surface to dry out.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.