MCE USA
Tel: 609-228-6898
Email: tech@MedChemExpress.com

MCE® MedChemExpress

Basement Membrane Matrix

1 Contents

Component	HY-K6002-5 mL	HY-K6002-10 mL
Basement Membrane Matrix	5 mL	10 mL

2 Introduction

MCE Basement Membrane Matrix is a natural basement membrane matrix extracted from mouse tumors and is composed mainly of various growth factors and extracellular matrix components. The main extracellular matrix components are: Laminin, Col-IV, Entactin, Heparan sulphate proteoglycans, etc. The main growth factor components are: insulin-like growth factor (IGF-1), transforming growth factor beta (TGF-β), vascular endothelial growth factor (VEGF), epidermal growth factor (EGF), fibroblast growth factor (bFGF), etc.The concentration of each component in MCE basement membrane matrix conforms to the standard type range.

MCE Basement Membrane Matrix is suitable for studies of tumor invasion, angiogenesis and organoids cultures while avoiding color interference in subsequent experiments.

3 Characteristics

Source	Mouse Tumor
Color	Yellow
Appearance	≤ 0°C:Solid; 0-4°C:Liquid; ≥4°C:Semi-gel or Gel
Protein concentration	8~13 mg/mL
Endotoxin	≤ 4.5 EU/mL
Gelling time	Room temperature: 5-30 min
Formulation	Supplied in DMEM and 50 μg/mL gentamicin

4 Operation Instructions

1. Usage

MCE Basement Membrane Matrix is available in four uses. Matrix protein concentration values are provided in the COA and may vary slightly from batch to batch. Calculate the required volume of matrix gel according to the actual protein concentration to obtain consistent experimental results. Please use pre-cool serum-free medium for dilution.

Usage	Function	Application
Thin Gel Method	Helps cell apposition	Primary cell expansion
Thick Gel Method	Protects cells from growing in the three-dimensional structure formed by the gel	In vitro angiogenesis
Thin Coating Method	Provides ECM substrate for cell amplification	Expansion of embryonic stem cells and pluripotent stem cells
Gel embedding Method	Highly simulated in vivo micro-environment	Organoids culture and tumor spheroid invasion and metastasis

2. Protocol & Experimental Conditions

(1) Protocol:

- Use a pre-cool pipette to blow the matrix gel evenly after thawing.
- Use pre-cool serum-free medium to dilute according to experimental requirements. Refer to the Experimental Conditions table for final concentrations.
- Place the culture plate on ice and inject the substrate gel dilution slowly against the wall to avoid air bubbles. Refer to the Experimental Conditions table for the volume injected.
- Transfer the culture plate to 37°C incubator gently. After gelling, aspirate off excess supernatant. Refer to the Experimental Conditions table for gel time.

(2) Experimental Conditions table:

Experimental condition	Thin Gel Method	Thick Gel Method	Thin Coating Method	Gel embedding Method
Final concentration	≥ 1 mg/mL	Percentage of matrix ≥ 67%	≥ 0.1 mg/mL	Percentage of total volume of matrix and cell suspension ≥ 67%
Injected volume	50 μL/cm^2	150-200 μL/cm^2	0.01-0.02 mg/cm^2	150-200 μL/cm^2
Gelling temperature	37°C	37°C	37°C	37°C
Gelling time	30 min	30 min	1 h	30 min

5 Storage

Store at -20°C, 2 years.

Avoid repeated freezing and thawing.

6 Precautions

1. Please bury this product with packaging in ice and thaw in the 4°C refrigerator. After thawing, make aliquots and keep them frozen.
2. Use pre-cool consumables to avoid gelling.
3. Avoid holding the container in your hands which may cause semi-gel. If it happens, please put matrix back to 0°C-4°C refrigerator for 1-2 hours to restore its fluidity.
4. Color variation is normal and does not affect the use of matrix. Due to the interaction of carbon dioxide with bicarbonate buffer and phenol red, the color may vary from straw yellow to deep red.
5. This product is for R&D use only, not for drug, household, or other uses.
6. For your safety and health, please wear a lab coat and disposable gloves to operate.