Arcegel Matrix GFR, LDEV-Free

Product description

Arcegel Matrix GFR, LDEV-Free Matrigel is a soluble basement membrane preparation extracted from EHS mouse tumors rich in extracellular matrix proteins. Its main components are laminin, type IV collagen, heparan sulfate proteoglycan (HSPG), nestin as well as growth factors such as TGF-beta, EGF, IGF, FGF, tissue plasminogen activator and other growth factors contained in EHS tumors. At room temperature, it aggregates to form a biologically active three-dimensional matrix, which simulates the structure, composition, physical properties and functions of the cell basement membrane in vivo, which is beneficial to the culture and differentiation of cells in vitro. It can be used for studies of cell morphology, biochemical function, migration, invasion and gene expression. Arcegel Matrix is a sterile product with a concentration of 8~12 mg/mL, which meets a variety of experimental requirements.

Specifications

Catalog Number	C231003E/C231003S
Specifications	5 mL/10 mL

Properties

Properties	Parameters
Product Line	Arcegel
Product specifications	5/10 mL
Classification	Growth Factor Reduced
Product Type	Basement Membrane Matrix
Form	Frozen
Species	EHS Mouse Tumors
Concentration	8~12 mg/mL
Endotoxin Level	Low
Phenol Red Indicator	Contain
Serum Level	None
LDEV Detection	None

Storage

Transported on dry ice. Stored at -20°C with a shelf life of 2 years.

Notes

1. After thawing, gently shake the Arcegel matrix to ensure uniform dispersion.
2. All aliquoting and handling procedures must be conducted in a sterile environment. The bottle cap can be wiped with 70% ethanol and air-dried.
3. Pre-cool experimental equipment (e.g., pipette tips, product tubes) before use to ensure the Arcegel matrix remains homogeneous.
4. The Arcegel matrix may exhibit color changes (from pale yellow to deep red) due to the interaction of phenol red and bicarbonate with CO_2. However, this color difference will decrease upon equilibration with 5% CO_2.
5. Cells can grow on the surface of the Arcegel matrix layer with a thickness of 0.5 mm or within the three-dimensional matrix of Arcegel matrix with a thickness of 1 mm. Excessive dilution of the Arcegel matrix will result in the formation of a non-gelatinous protein layer, suitable for cell adhesion but not for cell differentiation studies.
6. Arcegel rapidly gels at temperatures between 22~35°C. The gelled Arcegel matrix can return to a liquid state after 24~48 hours at 4°C.
7. After melting, aliquot the Arcegel into multiple small tubes. All aliquots must be placed in pre-cooled cryotubes, rapidly frozen, and stored to avoid repeated freeze-thaw cycles.
8. For your safety and health, wear laboratory attire and disposable gloves when handling.
9. For research use only.

Instructions

1. Thawing and preservation of Arcegel basement membrane/Matrix

【Note】Arcegel Matrix is very sensitive to temperature and must not be frozen and thawed repeatedly. The dispensing of Arcegel Matrix and the preparation before gelation must be performed on ice (4°C), because a slight increase of temperature may cause gelation, resulting in uneven Matrix or affecting subsequent gelation. Tubes or pipette tips used for aliquoting must be pre-cooled.

1) After receiving the product, if you do not use it temporarily, please directly store the whole bottle at -20°C (do not store it in a frost-free refrigerator).

2) For the first use, put the entire bottle of Arcegel Matrix in an ice box and put it at 4°C overnight to fully melt.

2. The use of Arcegel basement membrane/Matrix

Matrix gels rapidly at 22~35°C. In order to ensure the gel-forming performance and stability of Arcegel Matrix , the final dilution concentration should not be lower than 3 mg/mL (the concentration of Arcegel Matrix liquid varies from batch to batch).

Arcegel Matrix can be diluted in serum-free medium and should be used immediately after dilution.

1) Thin gel preparation method

a. After melting, mix the Arcegel Matrix with a pre-cooled pipette tip.

b. Put the culture plate to be used on ice, and add Arcegel Matrix at a concentration of 50 μL/cm^2 growth area.

c. Incubate at 37°C for 30 min, then the plate can be used.

2) Thick gel preparation method

a. After melting, mix the Arcegel Matrix with a pre-cooled pipette tip.

b. Put the culture plate to be used on ice, mix the cultured cells with Arcegel Matrix , and use a pre-cooled pipette tip to suspend the cells evenly. Arcegel Matrix was added at a concentration of 150~200 μL/cm^2 growth area.

c. Incubate at 37°C for 30 min and then the cell culture medium can be added. Cells can also grow on top of this thick gel.

3) Thin-layer coating method

a. After melting, mix the Arcegel Matrix with a pre-cooled pipette tip.

b. Dilute Arcegel Matrix to the desired concentration with serum-free medium. It is recommended to do a gradient experiment according to the specific experiment to determine the optimal coating concentration.

c. Add the diluted Arcegel Matrix to the culture vessel to be coated, and the coating amount covers at least all growth surfaces of the cells. Incubate for 1 hour at room temperature.

d. Remove uncoagulated and bound Arcegel Matrix and rinse gently with serum-free medium. The tablet is now ready for use.

【Note】Arcegel Matrix-coated plates are best used on the same day, but can also be adjusted according to specific applications. After adding the medium, the coated plates can be stored at 37°C for up to 1 week.