Arcegel Matrix LDEV-Free

Product description

Arcegel Matrix LDEV-Free is a soluble basement membrane preparation extracted from EHS mouse tumors rich in extracellular matrix proteins. Its main components consist of 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, including angiogenesis studies and tumor cell migration.

Specifications

Catalog Number	C231001E/C231001S
Specifications	5 mL/10 mL

Properties

Properties	Parameters
Product Line	Arcegel
Product specifications	5/10 mL
Classification	Basic Type
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 Arcegel Matrix, gently shake the vial to ensure uniform dispersion of the gel.
2. All handling and usage of the product must be conducted in a sterile environment. The vial cap can be wiped with 70% ethanol and air-dried.
3. Experimental equipment in contact with the product (e.g., pipette tips, product tubes) should be pre-cooled before use to ensure Arcegel Matrix is in a uniform slurry state.
4. Arcegel Matrix may undergo color changes (from pale yellow to deep red) due to the interaction of phenol red and bicarbonate with CO_2, but this color difference will decrease upon equilibration with 5% CO_2.
5. Cells can grow on the surface of Arcegel Matrix at a thickness of 0.5 mm or within the three-dimensional matrix of Arcegel Matrix at a thickness of 1 mm. Over-diluted Arcegel Matrix will form a non-gelatinous protein layer, which can be used for cell adhesion but not for cell differentiation studies.
6. Arcegel Matrix quickly gels at temperatures between 22~35°C. Once gelled, Arcegel Matrix can return to a liquid state after 24~48 hours at 4°C.
7. After melting, Arcegel Matrix should be aliquoted into multiple small tubes, all of which should be pre-cooled cryovials, rapidly frozen, and stored to avoid repeated freeze-thaw cycles.
8. For your safety and health, please wear a lab coat 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 should 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 holding must be pre-cooled.

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

2) For the first-time use, place the entire bottle of Arcegel Matrigel in a cooler box and then transfer it to 4°C overnight to allow complete thawing.

2. The use of Arcegel basement membrane/Matrix

Matrix gels rapidly at 22~35°C. In order to ensure the gelation 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, thoroughly mix the Arcegel Matrix with a pre-cooled pipette tip.

b. Put the required culture plate 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 cold 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 layer.

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 plates are now ready for use.

【Note】Arcegel Matrix-coated plates are best used on the same day, but storage duration 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.