Arcegel Matrix for Organoid culture, Phenol Red-Free, LDEV-Free

Product description

Arcegel Matrix for Organoid culture, Phenol Red-Free, LDEV-Free 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, phenol red-free, LDEV-free, with a concentration of 8~12 mg/mL, and has been validated for organoid culture, meeting the requirements for organoid construction.

Specifications

Catalog Number	C231009E/C231009S
Specifications	5 mL/10 mL

Properties

Properties	Parameters
Product Line	Arcegel
Product specifications	5/10 mL
Classification	Organoid Culture
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 reagent bottle to ensure uniform dispersion of Arcegel matrix gel.
2. All operations including aliquoting and usage of the product must be performed in a sterile environment. The bottle cap can be wiped with 70% ethanol and air-dried.
3. Experimental equipment (such as pipette tips, product tubes, etc.) in contact with the product should be pre-cooled to ensure that Arcegel matrix gel is in a homogeneous state.
4. Arcegel quickly gels at temperatures between 22~35°C. After gelling, the Arcegel matrix gel can return to a liquid state after 24~48 hours at 4°C.
5. After melting, Arcegel should be aliquoted into multiple small tubes. All aliquots must be stored in pre-cooled cryovials, quickly frozen, and stored to avoid repeated freeze-thaw cycles.
6. For your safety and health, please wear laboratory attire and disposable gloves when handling.
7. This product is 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 holding 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.

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

4) If bubbles are generated during the use of the matrixe, it can be instantly separated at 4°C for 15~30 seconds.

2. Organoid Culture Process (Using a 24-Well Plate as an Example)

1) Mix the thawed Arcegel matrix gel with specialized organoid culture medium and then mix the mixture with cells or tissues. Operate as quickly as possible to avoid gel formation.

2) Plant the mixed organoid suspension at the bottom center of the 24-well plate, approximately 20~30 μL per well, and spread the gel droplets slightly to achieve a thickness of about 2 mm. Avoid

contact of the suspension with the sidewalls of the plate. Place the plated culture plate in a 37°C carbon dioxide incubator and incubate for approximately 20~30 minutes until the matrix gel solidifies.

3) Once the Arcegel matrix gel has completely solidified, slowly add pre-prepared organoid culture medium along the wall at a rate of 700~800 μL per well.

4) Place the 24-well plate in a 37°C carbon dioxide incubator for culture. Regularly replace the fresh organoid culture medium and monitor the growth status of the organoids. (For organoid culture, a 24-well plate is commonly used with 30 μL per well for gel droplets, followed by adding 500~800 μL of organoid culture medium to cover the gel droplets; for a 96-well plate, 10 μL per well for gel droplets, followed by adding 200 μL of organoid culture medium to cover the gel droplets; for a 6-well plate, multiple 40 μL gel droplets per well can be planted, followed by adding 2~3 mL of organoid culture medium to cover the gel droplets.)

【Note】Dilute the matrix gel at a ratio of ⩾50% to ensure the stability of the Arcegel matrix gel structure during the culture process.