



Ceturegel™ Matrix High Concentration, LDEV-Free

Product description

Ceturegel™ Matrix High Concentration, 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) and nestin, as well as growth factors such as TGF-beta, EGF, IGF, FGF, tissue plasminogen activator and other growth factors contained in EHS tumors themselves. Ceturegel™ GFR Matrigel is a low growth factor matrigel obtained after special treatment, which can effectively ensure the needs of some experimental operations that require low growth factors, such as experiments related to signaling pathways and growth factors. 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 cell morphology, biochemical function, migration, Invasion and gene expression studies.

The three-dimensional culture matrix formed by Matrigel can promote the adherence and differentiation of epithelial cells, hepatocytes, Sertoli cells, melanoma cells, vascular endothelial cells, thyroid cells and hair follicle cells. Ceturegel™ Matrigel can affect gene expression in three-dimensional cultures of murine hepatocytes and human mammary epithelial cells. At the same time, Ceturegel™ Matrigel can be used as a basic scaffold for various tumor cell invasion studies, an essential matrix for in vitro and in vivo studies of angiogenesis, and a three-dimensional scaffold for the growth of transplanted tumor cells in in vivo animal models. Ceturegel™ Matrigel also supports the regeneration of peripheral nerves and the differentiation of bovine fallopian tube epithelial cells.

Ceturegel™ Matrix High Concentration, LDEV-Free Matrigel is a sterile product with a concentration of more than 18 mg/mL, which can meet various experimental requirements, including: in vivo tumorigenesis, angiogenesis research and tumor cell migration, 3D cell research and other applications.

Components

Components No.	Name	40187ES08	40187ES10
40187	Ceturegel™ Matrix High Concentration, LDEV-Free	5 mL	10 mL

Specifications

Concentration	≥18 mg/mL
Product Type	Basement Membrane Matrix
Endotoxin Level	Low
Transportation Conditions	Dry Ice Transportation
Product Line	Ceturegel™
Form	Frozen
Phenol Red Indicator	Contain
Product specifications	5/10 mL



Species	EHS Mouse Tumors
Classification	High Concentration
Serum Level	None
LDEV Detection	None

Shipping and Storage

Dry ice shipping. -15°C ~ -25°C storage, valid for two years.

Instructions

1. Ceturegel™ Matrix will have a chromatic aberration (pale yellow to dark red) caused by the interaction of phenol red and bicarbonate with CO₂, but the chromatic aberration will decrease when equilibrated with 5% CO₂. After freezing and thawing, shake the vial gently to disperse the Ceturegel™ Matrix. All operations should be carried out in a sterile environment, and the cap of the reagent bottle can be wiped with 70% ethanol and dried naturally. A pre-cooled pipette should be used to ensure that the Ceturegel™ Matrix is homogenized.

2. Cells can grow on the surface of the 0.5 mm thick Ceturegel™ matrix layer or within the 1 mm thick Ceturegel™ matrix. Over-diluted Ceturegel™ Matrix will form a non-glia protein layer that can be used for cell adhesion, but not for cell differentiation studies.

3. Thawing and preservation of Ceturegel™ basement membrane/Matrix

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

3.2 For the first use, put the entire bottle of Ceturegel™ Matrix in an ice box and put it at 4°C overnight to fully melt. Recommendation: Centrifuge at 14,000 rpm for 20 min at 4°C and carefully aspirate the supernatant.

3.3 Ceturegel™ Matrix is very sensitive to temperature and must not be frozen and thawed repeatedly. The dispensing of Ceturegel™ 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.

4. Special attention should be paid to the use of Ceturegel™ basement membrane/Matrix

Matrix gels rapidly at 22-35°C. In order to ensure the gel-forming performance and stability of Ceturegel™ Matrix, the final dilution concentration should not be lower than 3 mg/mL (the concentration of Ceturegel™ Matrix liquid varies from batch to batch). Ceturegel™ Matrix can be diluted in serum-free medium and should be used immediately after dilution.

Ceturegel™ Matrix-coated plates are best used on the same day, but can also be adjusted according to specific applications. After the coated plates are added to the medium, they can be stored at 37°C for up to 1 week.

4.1 Thin glue preparation method

4.1.1 After melting, mix the Ceturegel™ Matrix with a pre-cooled pipette tip.

4.1.2 Put the culture plate to be used on ice, and add Ceturegel™ Matrix at a concentration of 50 μL/cm² growth area.

4.1.3 Place at 37°C for 30min, then the plate can be used.

4.2 Thick glue preparation method

4.2.1 After melting, mix the Ceturegel™ Matrix with a pre-cooled pipette tip.

4.2.2 Put the culture plate to be used on ice, mix the cultured cells with Ceturegel™ Matrix, and use a cold pipette tip to suspend the cells evenly. Ceturegel™ Matrix was added at a concentration of 150-200 μL/cm² growth area.



4.2.3 Place at 37°C for 30 min, at which point the cell culture medium can be added. Cells can also grow on top of this thick glue.

4.3 Thin-layer coating method

4.3.1 After melting, mix the Ceturegel™ Matrix with a pre-cooled pipette tip.

4.3.2 Dilute Ceturegel™ 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.

4.3.3 Add the diluted Ceturegel™ 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.

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

Notes

1. The thawed Ceturegel™ Matrix can be divided into multiple small tubes, all pre-cooled cryovials should be used for rapid freezing and storage to avoid multiple freezing and thawing.
2. Ceturegel™ Matrix rapidly at 22-35°C, so thaw overnight on ice at 4°C (partial gel formation at 4°C as the temperature rises). All supplies should be placed in an ice bath before use, and Ceturegel™ Matrix must be handled with pre-cooled pipettes, tips and vials. The gelatinized Ceturegel™ Matrix can be liquid again after 24-48 hours at 4°C.
3. The operations such as packaging and use of the product should be carried out in a sterile environment, and the experimental equipment (such as: pipette tips, product tubes, etc.) in contact with the product should be pre-cooled before use.
4. For your safety and health, please wear a lab coat and disposable gloves.