

## Ceturegel™ Matrix Phenol Red-Free, LDEV-Free

### Product Information

Product Name	Cat#	Size
Ceturegel™ Matrix Phenol Red-Free, LDEV-Free	40184ES08	5 mL
	40184ES10	10 mL

### Product Description

Ceturegel™ Matrix 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) 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 Matrix is a low growth factor Matrix 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 Matrix can promote the adherence and differentiation of epithelial cells, hepatocytes, Sertoli cells, melanoma cells, vascular endothelial cells, thyroid cells and hair follicle cells. Ceturegel™ Matrix can affect gene expression in three-dimensional cultures of murine hepatocytes and human mammary epithelial cells. At the same time, Ceturegel™ Matrix 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™ Matrix also supports the regeneration of peripheral nerves and the differentiation of bovine fallopian tube epithelial cells.

Ceturegel™ Matrix Phenol Red-Free, LDEV-Free is a sterile product, does not contain phenol red, and has a concentration of 8~12 mg/mL. It meets various experimental requirements, including: it is mainly used in color detection such as fluorescence detection experiments.

### Product Contents

Contents No.	Contents Name	Catalog No./Specification	
		40184ES08	40184ES10
40184	Ceturegel™ Matrix Phenol Red-Free, LDEV-Free	5 mL	10 mL

### Shipping and Storage

Dry ice shipping, -20 °C storage, valid for two years.

### Applications

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

**【Note】** : 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 in temperature may cause gelation, resulting in uneven Matrix or affecting subsequent gelation.. Tubes or pipette tips used for holding must be pre-cooled.

- 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).
- 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.

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

Matrix gels rapidly at 22-35°C. Serum-free medium can be used to dilute Ceturegel™ Matrix. The final dilution concentration varies from batch to batch of matrix collagen solution. In order to ensure the gel-forming performance and stability of Ceturegel™ Matrix, it needs to be used immediately after dilution.

A. Thin glue preparation method

- 1) After melting, mix the Ceturegel™ Matrix with a pre-cooled pipette tip.
- 2) Put the culture plate to be used on ice, and add Ceturegel™ Matrix at a concentration of 50 μL/cm<sup>2</sup> growth area.
- 3) Place at 37°C for 30min, then the plate can be used.

B. Thick glue preparation method

- 1) After melting, mix the Ceturegel™ Matrix with a pre-cooled pipette tip.
- 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/cm<sup>2</sup> growth area.
- 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.

C. Thin-layer coating method

- 1) After melting, mix the Ceturegel™ Matrix with a pre-cooled pipette tip.
- 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.
- 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) Remove uncoagulated and bound Ceturegel™ Matrix and rinse gently with serum-free medium. The tablet is now ready for use.

[Note]: 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.

## Product Features

After the Ceturegel™ Matrix is frozen and thawed, shake the reagent bottle gently to disperse the Ceturegel™ Matrix evenly. 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.

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.

**【Note】** : 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.

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.

## Notes:

1. 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.
2. For your safety and health, please wear a lab coat and disposable gloves.
3. This product is for scientific research use only and is prohibited for human use.