

## GelNest™ Matrix, High Concentration

**Gel Concentration Inquiry:** If the label on the bottle is lost, please click or copy the link below to your browser, and select "Related Reference Tools->Certificates" to download the batch-specific COA.

<https://www.nestscientificusa.com/product/detail/636882319776419840>

### Product overview

GelNest™ Matrix is prepared from basement membrane components extracted from mouse tumor tissues. The main components include laminin, type IV collagen, heparan sulfate proteoglycan, etc. These components can provide the support and signals required for cell adhesion, differentiation, and proliferation. They can also simulate the characteristics of the basement membrane in a physiological environment and improve the success rate and effect of cell culture.

In addition to basement membrane components, GelNest™ Matrix is also rich in a variety of growth factors. These growth factors can promote cell differentiation, proliferation, and migration, further mimicking cell signaling pathways and interactions in physiological environments. GelNest™ Matrix has a wide range of application prospects, especially in tissue engineering, cell culture and research. It can be used for research on organoid culture, stem cell differentiation, angiogenesis, migration or invasion, and *in vivo* tumorigenesis.

### Product information

Product number	Product name	Packaging specifications
211252	GelNest™ Matrix, High Concentration, LDEV-Free	Bag Package, 5 mL/bottle, 1 bottle/bag
211262	GelNest™ Matrix, High Concentration, Phenol Red-Free, LDEV-Free	Bag Package, 5 mL/bottle, 1 bottle/bag

211251	GelNest™ Matrix, High Concentration, LDEV-Free	Bag Package, 5 mL/bottle, 2 bottle/bag
211261	GelNest™ Matrix, High Concentration, Phenol Red-Free, LDEV-Free	Bag Package, 5 mL/bottle, 2 bottle/bag
211352	GelNest™ Matrix, High Concentration, LDEV-Free, Ultra-low Endotoxin	Bag Package, 5 mL/bottle, 1 bottle/bag
211362	GelNest™ Matrix, High Concentration, Phenol Red-Free, LDEV-Free, Ultra-low Endotoxin	Bag Package, 5 mL/bottle, 1 bottle/bag

## Product parameters

<b>Source</b>	Mouse tumor tissue basement membrane components
<b>Formulation*</b>	High concentration
<b>Protein concentration</b>	See label, or please download the COA from our official website to obtain a lot-specific concentration.
<b>Appearance</b>	GelNest™ Matrix is liquid at 4°C but forms a gel at 37°C. High concentration gel(>13mg/mL) appear viscous and not clear. Phenol red-containing gel appears bright yellow when frozen, and red at temperatures above 0° C.
<b>Applications</b>	This product is suitable for <i>in vivo</i> animal experiments, angiogenesis, tumor formation experiments, etc.
<b>Storage and shelf life</b>	Store in a refrigerator at -20°C (frost-free function off) or a -80°C freezer for up to 2 years. It is recommended to aliquot the thawed product into single-use portions and store it in -20°C or -80°C for up to 2 years.
<b>Precautions</b>	GelNest™ Matrix will start to solidify when the temperature is higher than 10°C. Please try to operate on ice as much as possible, and it is recommended to pre-cool the consumables that directly contact the gel, such as pipette tips.

\*Please use phenol red-free matrix gel for colorimetric analysis.

## Experimental procedures

Please determine the specific experimental steps based on cell types, culture conditions, and application experience.

## *In vivo tumorigenesis*

1. Prepare logarithmic growth phase HepG2 cells with a cell confluence of approximately 80-90%. Replace the culture medium with fresh medium one day before cell collection.
2. Digest the cells with trypsin and add serum-free medium to form a cell suspension. Centrifuge and wash the cells once, then resuspend them to a final concentration of  $8 \times 10^7$  cells/mL.
3. Dilute the cell suspension and GelNest™ Matrix, High Concentration in a 1:1 ratio at 4°C.
4. Subcutaneously inject 100µL cell suspension into the right axilla of nude mice.
5. Return the mice to their cages and continue feeding them. Tumors should form approximately one week later. Euthanize the mice and remove the tumors when the tumor volume does not exceed 1500 mm<sup>3</sup>. Take photographs for record.

## **Safety recommendations and limitations**

Please follow good laboratory safety practices.

**For research use only. Not intended for diagnostic or therapeutic purposes. Contains ingredients of animal origin.**

## **Technical support and contact information**

For FAQ, GelNest™ Matrix Selection Guide, Quality Assurance COA/COC or other technical support and product issues, please refer to our website or use the following contact information.

Production and after-sales service unit: Wuxi NEST Biotechnology Co., Ltd.

Production and after-sales address: No.530, Xida Road, Meicun Industrial Park, Xinwu

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