

GelNest™ Matrix, for Angiogenesis Experiment, Low Endotoxin, LDEV-Free

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. They can simulate the characteristics of the basement membrane in a physiological environment and improve the success rate and effect of cell culture.

In addition to the components of the basement membrane, GelNest™ Matrix is rich in various growth factors. These growth factors can promote cell differentiation, proliferation, and migration, thereby further simulating the cell signaling pathways and interactions in the physiological environment. The growth factors and their concentrations in GelNest™ Matrix for angiogenesis have been optimized and validated, making it highly suitable for studying biological processes. It can be used to explore and understand cell signaling pathways and can be applied in the fields of vascular diseases, tissue engineering, and regenerative medicine.

Product information

Product number	Product name	Packaging specifications
211492	GelNest™ Matrix, for Angiogenesis Experiment, Low Endotoxin, LDEV-Free	Bag Package, 5 mL/bottle, 1 bottle/bag

Product parameters

Source	Mouse tumor tissue basement membrane components
Formulation	With phenol red. Optimized for angiogenesis experiments.
Protein concentration	See label, or please download the COA from our official website to obtain a lot-specific concentration.
Appearance	GelNest™ Matrix is liquid at 4°C but forms a gel at 37°C. Phenol red-containing gel appears bright yellow when frozen, and red at temperatures above 0° C.
Applications	Validated suitable for <i>in vitro</i> angiogenesis experiments.
Storage and shelf life	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.
Precautions	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.

Experimental procedures

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

Angiogenesis experiments

1. Replace complete culture medium with starvation medium: DMEM medium containing 0.2% FBS, 2mM L-glutamine, 1mM sodium pyruvate, 100U/mL penicillin and 100µg/mL streptomycin. Starve the cells for 24 hours.
2. Spread 50µL GelNest™ Matrix(no dilution recommended) evenly on the bottom of a 96-well plate. *(To prevent the matrix gel from adhering to the inner wall of the pipette head, you can use the pipette head to blow FBS once before absorbing the matrix gel, and rinse the inner wall of the pipette head with FBS.)*
3. Place the 96-well plate in a 37°C cell culture incubator for 30 minutes to solidify the

matrix gel.

4. Digest HUVEC cells and perform cell counting.
5. Seed 5×10^4 HUVEC cells to a 96-well plate containing the matrix gel for a total of 200 μL for each well. Place the 96-well plate into the incubator for culture.
6. The vascular-like network structure will form within 3 to 12 hours. This is the best time to observe.
7. At the optimal observation time point, remove the medium carefully and stain the cells with Calcein AM (green) medium at a concentration of 1/1000. Use a microscope to image the cells and record the morphology and characteristics of the vascular network.

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.

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