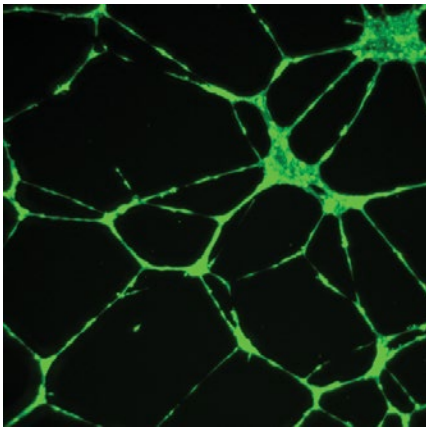
Corning® Matrigel®
Basement Membrane Matrix

Certified LDEV-free

CORNING



Corning Human Umbilical Vein Endothelial Cells (HUVEC-2) stained with Calcein AM and cultured on Corning Matrigel matrix.

Corning Matrigel basement membrane matrix is effective for the attachment and differentiation of both normal and transformed anchorage-dependent epithelioid and other cell types. These include neurons[5,6], Sertoli cells[7], chick lens[8], vascular endothelial cells[9], and hepatocytes[10]. Matrigel matrix will influence gene expression in adult rat hepatocytes[11] as well as three-dimensional (3D) culture in mouse[12-15] and human[16,17] mammary epithelial cells. It will support *in vivo* peripheral nerve regeneration[18-20], can be used for metabolism and toxicology studies[21,22], and is the basis for several types of tumor cell invasion assays[23,24]. Matrigel matrix provides the substrate necessary for the study of angiogenesis both *in vitro*[25,26] and *in vivo*[27-29]. Matrigel matrix also supports *in vivo* propagation of human tumors in immunosuppressed mice[30-32].

Wide Selection of Basement Membrane Matrices

Corning Matrigel Matrix Growth Factor Reduced is suited for applications where a more highly defined basement membrane preparation is desired. Available in standard Growth Factor Reduced (GFR), High Concentration (HC), and phenol red-free formats.

Corning Matrigel Matrix High Concentration is suited for *in vivo* applications where a high protein concentration augments growth of tumors. The high protein concentration also allows the Matrigel matrix plug to maintain its integrity after subcutaneous injection into mice. Available in standard, GFR, and phenol red-free formats.

Corning Matrigel Matrix Phenol Red-free is recommended for assays which require color detection (i.e., fluorescence).

Corning Matrigel hESC-qualified Matrix has been qualified as mTeSR®1-compatible by STEMCELL Technologies, thus eliminating the need for time-consuming screening in order to provide the reproducibility and consistency essential for your human embryonic stem (hES) cell research. The mTeSR1 formulation and Corning Matrigel matrix have been shown to be a successful combination for feeder-free maintenance of different WiCell™ hES cell lines for up to 20 passages (mTeSR1, STEMCELL Technologies Cat. No. 85850).

Corning Matrigel Matrix for Organoid Culture is a solubilized basement membrane preparation that has been optimized for organoid culture. Verified to support both mouse and human organoid growth and differentiation from healthy and/or diseased tissue, each lot has a specific elastic modulus value indicating the stiffness of the gel formed and is qualified to form stable 3D domes commonly used in organoid culture protocols.

Corning Matrigel basement membrane matrix is a solubilized basement membrane preparation extracted from the Engelbreth-Holm-Swarm (EHS) mouse sarcoma, a tumor rich in extracellular matrix proteins to include laminin (a major component), collagen IV, heparan sulfate proteoglycans, and entactin/nidogen[1,2]. Corning Matrigel matrix also contains TGF-beta, epidermal growth factor, insulin-like growth factor, fibroblast growth factor, tissue plasminogen activator[3,4], and other growth factors which occur naturally in the EHS tumor.

Typical Applications

Cell Growth and Differentiation

Corning® Matrigel® matrix is especially suited for the culture of polarized cells, such as epithelial cells. It promotes the differentiation of precursor cells into many cells types including hepatocytes, neurons, mammary epithelial, endothelial, and smooth muscle cells.

In Vivo Angiogenesis Studies

Corning Matrigel matrix HC can be used to assess *in vivo* angiogenic activity of different compounds by subcutaneous injection into mice (Matrigel plug assay). The plugs are subsequently removed and analyzed for the formation of blood vessels.

Augmentation of Tumor Growth in Nude Mice

Corning Matrigel matrix HC has been shown to promote successful transplantation of many human tumor cells including prostatic, breast, small-cell lung, colon, adrenal carcinomas, melanomas, and lymphoblastic leukemia cells. Also, it has been found to increase tumor growth rates *in vivo*.

Quality Control

- Mouse colonies are routinely screened for pathogens via Mouse Antibody Production (MAP) testing.
- Extensive PCR testing is performed to screen for a number of pathogens, including LDEV, to ensure strict control of raw materials used during the manufacturing process.
- Tested and found negative for bacteria, fungi, and mycoplasma.
- Protein concentrations are determined by Lowry method.
- Endotoxin units are measured by Limulus Amoebocyte Lysate assay.
- Corning Matrigel matrix gel stability is tested for a period of 14 days at 37°C.
- Biological activity is determined for each lot using a neurite outgrowth assay. Chick dorsal root ganglia are plated on a 1.0 mm layer of Corning Matrigel matrix and must generate positive neurite outgrowth response after 48 hours without addition of nerve growth factor.

Ordering Information

Cat. No.	Description	Size	Qty/Cs
356234	Corning Matrigel matrix, LDEV-free	5 mL	1
354234	Corning Matrigel matrix, LDEV-free	10 mL	1
356237	Corning Matrigel matrix, phenol red-free, LDEV-free	10 mL	1
356235	Corning Matrigel matrix, LDEV-free, 50 mL (5 x 10 mL)	10 mL	5
356232	Corning Matrigel matrix, LDEV-free, 25 mL (5 x 5 mL)	5 mL	5
356254	Corning Matrigel matrix, LDEV-free, 100 mL (10 x 10 mL)	10 mL	10
356230	Corning Matrigel matrix, GFR (growth factor reduced), LDEV-free	5 mL	1
354230	Corning Matrigel matrix, GFR, LDEV-free	10 mL	1
356231	Corning Matrigel matrix, GFR, phenol red-free, LDEV-free	10 mL	1
356252	Corning Matrigel matrix, GFR, LDEV-free, 50 mL (5 x 10 mL)	10 mL	5
356253	Corning Matrigel matrix, GFR, LDEV-free, 100 mL (10 x 10 mL)	10 mL	10
356238	Corning Matrigel matrix, GFR, phenol red-free, LDEV-free, 50 mL (5 x 10 mL)	10 mL	5
356239	Corning Matrigel matrix, GFR, phenol red-free, LDEV-free, 100 mL (10 x 10 mL)	10 mL	10
354248	Corning Matrigel matrix, HC (high concentration), LDEV-free	10 mL	1
354262	Corning Matrigel matrix, HC, phenol red-free, LDEV-free	10 mL	1
354263	Corning Matrigel matrix, HC, GFR, LDEV-free	10 mL	1
354277	Corning Matrigel matrix, hESC qualified, LDEV-free	5 mL	1
356277	Corning Matrigel matrix, hESC-qualified, LDEV-free, 25 mL (5 x 5 mL)	5 mL	5
356278	Corning Matrigel matrix, hESC-qualified, LDEV-free, 50 mL (10 x 5 mL)	5 mL	10
356255	Corning Matrigel matrix for organoid culture, phenol red-free, LDEV-free	10 mL	1

Typical protein concentrations for Corning Matrigel matrix range between 7 to 12 mg/mL. Matrigel matrix High Concentration ranges from 18 to 22 mg/mL. In some instances, individual lots may fall outside this range. A lot-specific Certificate of Analysis is provided with each Corning Matrigel matrix lot noting exact endotoxin and protein concentrations.

For additional Corning Extracellular matrix products, visit **www.corning.com/matrigel.**

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