denovoMATRIX
ENABLING BIOLOGY IN VITRO

screenMATRIX
BIOMATRICES FOR CELL CULTURE

Information sheet

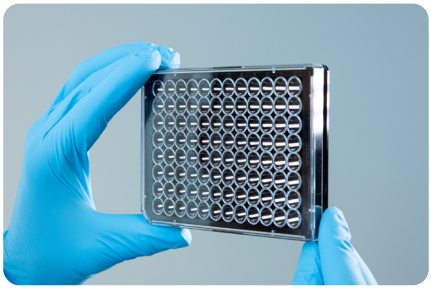
denovoMATRIX develops and manufactures biomimetic coatings that enable the culture of a wide variety of primary cells, stem cells, and established cell lines. In vivo, extracellular matrix (ECM) molecules serve specific roles, which contribute to regulation of adhesion, differentiation, migration, phenotype, organization, and structure. Our coatings recapitulate key functions of the natural ECM making cell culture easy, robust, and biologically relevant.

CELL SEEDING PROTOCOL

1. Calculate the number of cells necessary for your screenMATRIX (96 wells x 0.34 cm^2).
2. Harvest your cells from running cultures, wash and count.
   - Note: Thawing cells and directly seeding them onto the screenMATRIX is not recommended.
3. Unpack your screenMATRIX plates.
4. Seed your cells at the desired density into each well.
   - Use 100 µL - 200 µL of media in each well.
   - screenMATRIX plates do not require a pre-incubation with medium.
   - We recommend seeding cells in 3 plates for 3 technical replicates.
5. Analyze your cells.
   - screenMATRIX plates are optimal for microscopic examinations (phase contrast as well as fluorescence), well suitable for colorimetric assays as well as standard DNA/RNA and protein isolation protocols and are compatible with automated systems.

IMPORTANT NOTES

- Always use aseptic techniques, work in a laminar flow hood and use sterilized equipment.
- Take care not to scratch the surface of screenMATRIX plates when pipetting – this can potentially result in cells being exposed to the tissue culture plastic.
- screenMATRIX plates are stable for 1 year at room temperature.



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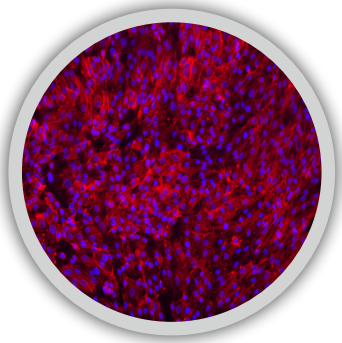
For more information about screenMATRIX and other products, please visit **www.denovomatrix.com**

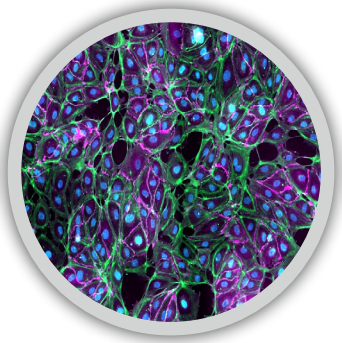
Research use only

The screenMATRIX is assembled using the glycosaminoglycan sugars (GAGs) dextran sulfate, heparin, chondroitin and dermatan. With the exception of the synthetic dextran sulfate, these molecules are naturally present in the extracellular matrix (ECM) and have important roles in signaling as well as growth factor binding. Peptides, which mimic various ECM proteins, complete the composition of the screenMATRIX. Some recapitulate important ECM adhesion proteins such as fibronectin, vitronectin, laminin, and collagen. Others mimic signaling proteins such as bone morphogenic protein, fibroblast growth factor, and transforming growth factor (among others).

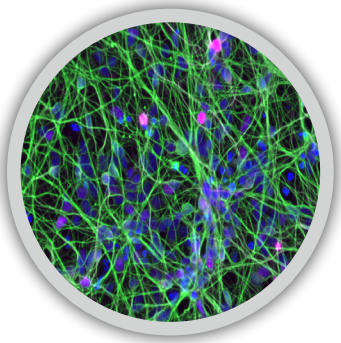
		1	2	3	4	5	6	7	8	9	10	11	12
Dextran	A	FGF + RGD	Fibronectin	RGD	laminin 1	laminin 2	laminin 3	laminin 4	laminin 5	laminin 6	Laminin 7 + FN2	Vitronectin + FN2	Collagen 1
	B	Vitronectin	Bone sialoprotein	Osteocalcin	Osteopontin	BMP-2 + RGD	E-Cadherin	Tenascin 1	Tenascin 2	Perlecan + RGD	TGF	NCAM	Collagen IV
Heparin	C	FGF + RGD	Fibronectin	RGD	laminin 1	laminin 2	laminin 3	laminin 4	laminin 5	laminin 6	Laminin 7 + FN2	Vitronectin + FN2	Collagen 1
	D	Vitronectin	Bone sialoprotein	Osteocalcin	Osteopontin	BMP-2 + RGD	E-Cadherin	Tenascin 1	Tenascin 2	Perlecan + RGD	TGF	NCAM	Collagen IV
Chondroitin	E	FGF + RGD	Fibronectin	RGD	laminin 1	laminin 2	laminin 3	laminin 4	laminin 5	laminin 6	Laminin 7 + FN2	Vitronectin + FN2	Collagen 1
	F	Vitronectin	Bone sialoprotein	Osteocalcin	Osteopontin	BMP-2 + RGD	E-Cadherin	Tenascin 1	Tenascin 2	Perlecan + RGD	TGF	NCAM	Collagen IV
Dermatan	G	FGF + RGD	Fibronectin	RGD	laminin 1	laminin 2	laminin 3	laminin 4	laminin 5	laminin 6	Laminin 7 + FN2	Vitronectin + FN2	Collagen 1
	H	Vitronectin	Bone sialoprotein	Osteocalcin	Osteopontin	BMP-2 + RGD	E-Cadherin	Tenascin 1	Tenascin 2	Perlecan + RGD	TGF	NCAM	Collagen IV



Endothelial cells



HUVECs - MSCs



Neurons

We also offer specific matrices for human mesenchymal stem cells (MSCs) and induced pluripotent stem cells (iPSCs). Check out our myMATRIX MSC and myMATRIX iPSC product lines.

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For more information about screenMATRIX and our other products, visit **www.denovomatrix.com**