# iMatrix-411

iMatrix-411 is the recombinant human Laminin-411 E8 fragment. After culturing on iMatrix-511 and replacing it to iMatrix-411, endothelial progenitor cells are efficiently induced from pluripotent stem cells.

## Features

 Optimized for inducing vascular endothelial cells from human pluripotent stem cells.









Phenotypes of endothelial cells induced from pluripotent stem cells on iMatrix-411 coated plate. Acetyl-LDL uptake (Red), CD31 (Green) expression and nuclear staining (Blue). Scale bar: 10 µm

## **Reference** (example)

Ohta et al., Laminin-guided highly efficient endothelial commitment from human pluripotent stem cells Scientific. Reports., 6, 35680, (2016)

[Manufacturer: MAX]

Product Name	Code	Size	Storage
iMatrix-411	892041	2 x 175 µg	4℃
	892042	6 x 175 µg	

How much volume of iMatrix is required in my culture? No worries! Visit http://www.matrixome.co.jp/ en/products/imatrix-511 and use helpful calculator!

All products here are research use only, not for diagnostic use NOTE Specs might be changed for improvement without notice X Numbers after "#" represents product code

## Bio-REV Pte. Ltd.



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## iMatrix-511 calculator Make a solution Selection and innu Type of Dish / Plate / Flas Number of Dish(es) / Plate well(s) / Flask(s) Final iMatrix-511 / -511 silk / -411 / -221 con Pre-coat : 0.5 µg/cm e-mix : 0.25 µg/c

※ Company name and product name are trademark or registered mark ※ Please contact your local distributors for orders, quote request and inquiry

## Funakoshi Co., Ltd.

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iMatrix series are recombinant human laminin fragment products, optimized as a cell culture substrate (coating material).

Laminin is:

- (1) One of the extra cellular matrices (ECMs) located in the basement membrane of animals.
- (2) Types in the basement membrane differ significantly from one cell type to another.
- (3) Plays an important role for cell growth, motility and differentiation through integrins.
- (4) Composed of three chains;  $\alpha$ -,  $\beta$ -, and  $\gamma$  chain and 15 types of laminin isoforms are already known.

iMatrix is the purified E8 fragment in  $\alpha$ -chain of laminins, which has integrin binding ability. Depending on cultured cell types, 3 types of iMatrix (-511, -221 and -411) are available as an optimized product.



MAX-2001-F13 (2020.01)

# Best cell culture substrate from laminin

Motrix

# iMatrix-511 iMatrix-511 silk

iMatrix-511 is the recombinant human Laminin-511 E8 fragment, produced by CHO-S cells (iMatrix-511) or transgenic silkworm cocoon (iMatrix-511 silk).iMatrix-511 is very useful for iPS / ES cells as cell culture substrate.

## **Features**

- Optimized for ES / iPS cell culture but also works for various cells.
- High cell viability
- Feeder-free culture
- No ROCK inhibitor is required in replacing medium except for passaging
- Easy to use, solution format (0.5 mg / mL)

## **Example Data**



Human Epidermal Cells (A) and Vascular Endothelial Cells (B) were cultured on iMartix-511. More efficient adhesion and extension can be observed when cultured on iMatrix-511.

## **Reference (examples)**

Ayabe, H. et al., Optimal Hypoxia Regulates Human iPSC-Derived Liver Bud Differentiation through Intercellular TGFB Signaling. Stem Cell Reports, 11, 1-11, (2018)

Musah, S. et al., Directed differentiation of human induced pluripotent stem cells into mature kidney podocytes and establishment of a lomerulus Chip. Nature protocols, **13**(7), 1662, (2018)

## **Product Information**

## **Product Name** Code Size Storage 892011 2 x 175 µg iMatrix-511 4℃ 892012 6 x 175 µg **Product Name** Size Code Storage 6 x 175 µg iMatrix-511 silk 892021 4℃

# Easy Matrix-511

## Easy iMatrix-511 and Easy iMatrix-511 silk are ready to use format of

iMatrix-511 or iMatrix-511 silk. No dilution step and laborious calculation of concentration are required.

Product Information [Manufacturer : MA>			
Product Name	Code	Size	Storage
Easy iMatrix-511	892018	100 mL	4℃
Product Name	Code	Size	Storage
Easy iMatrix-511 silk	892024	100 mL	4℃

More Information of iMatrix-511 / iMatrix-511 silk : https://www.funakoshi.co.jp/exports\_contents/46137 Easy iMatrix-511 : https://www.funakoshi.co.jp/exports\_contents/81116

# iMatrix-221

iMatrix-221 is the recombinant human Laminin-221 E8 fragment. Laminin 221 is known to bind to integrin  $\alpha$ 7X2 $\beta$ 1 protein, which is selectively expressed in muscle tissue, especially in cardiac and skeletal muscle cells.

## Features

[Manufacturer: MAX]

· Optimized for enrichment and maintenance of cardiomyocytes.



Product Information			[Manufacturer : MAX]
Product Name	Code	Size	Storage
iMatrix-221	892061	2 x 175 µg	4℃
	892062	6 x 175 µg	
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See the movie of differentiated cardiomyocytes pulsating on iMatrix-221 at: https://youtu.be/nk5nxPvVM5o