



# iMatrix-511

 Product No. AMS.892 011
 350 μg

 Product No. AMS.892 012
 1,050 μg

Version 010 Store at 2-15°C

**Product description:** iMatrix-511 is a recombinant human laminin-511 E8 fragment protein expressed in Chinese Hamster Ovary (CHO)-S cells. iMatrix-511 contains the integrin-binding site of the laminin-511 molecule. iMatrix-511 is a useful cell culture substrate for feeder-free culture and single-cell passage of ES cells and iPS cells, facilitating stable culture expansion. iMatrix-511 is also useful for the culture of other cells adhering to laminin-511.

**Content:** Recombinant human laminin-511 E8 fragment protein in PBS(-)

Concentration: 0.5 mg/mL

 Amount:
 175 μg / 0.35 mL / tube

 Product No.
 892 011
 350 μg / 2 tubes

 Product No.
 892 012
 1,050 μg / 6 tubes

Storage: Store at 2°C to 15°C, protect from light.

**Expiration date:** The shelf life is 2 years from the date of manufacture. The expiration date is printed on the outer carton.

Activity: The dissociation constant (Kd) for the binding with integrin  $\alpha 6\beta 1$  is 10 nM or less.

**Methods of use:** By either of the following methods, iMatrix-511 can be coated onto a culture vessel. <u>The</u> <u>optimum coating density may differ by cell-type, cell-</u> <u>line, medium selected, or purpose</u>. Insufficient coating density may result in the detachment of cells and varied cell conditions while the excessive coating density may lead to difficulty in detaching cells for passage.

## A. Pre-coating method

Determine the optimal coating density.  $0.5 \ \mu g/cm^2$  is a standard but test between 0.1 and  $1.5 \ \mu g/cm^2$ .

- Dilute iMatrix-511 with PBS(-). Use the diluted iMatrix-511 immediately. To coat with 0.5 µg/cm<sup>2</sup> onto a 6-well plate with 9.6 cm<sup>2</sup>/well, dilute 9.6 µL of iMatrix-511 with 2 mL of PBS(-) per well.
- 2) Place the diluted iMatrix-511 into a culture vessel and incubate either at 37°C for 1 h, or at room temperature for 3 h, or at 4°C overnight.
- Aspirate coating solution. Then, immediately seed your cells. Do not allow the coated surface to dry.

## **B.** Pre-mixing method

Determine the optimal coating density for cell culture. The standard density is  $0.25 \ \mu\text{g/cm}^2$  but test between 0.1 and  $1.5 \ \mu\text{g/cm}^2$ . The optimal coating density may be affected by the medium and cell density of the cell suspension.

- 1) Add iMatrix-511 to the cell suspension. To coat with 0.25  $\mu$ g/cm<sup>2</sup> onto a 6-well plate with 9.6 cm<sup>2</sup>/well, add 4.8  $\mu$ L of iMatrix-511 to 2 mL of the cell suspension per well.
- 2) Place the cell suspension containing iMatrix-511 into a culture vessel.

\*If you face difficulties in detaching cells for passage, re-adjust the conditions (e.g., reduce the coating density).

### **References:**

Taniguchi Y. et al. (2009), J. Biol. Chem. 284 (12):
7820-31
Miyazaki T. et al. (2012), Nat. Commun. 3: 1236
Nakagawa M. et al. (2014), Sci. Rep. 4: 3594
Takashima Y. et al. (2014), Cell 158 (6): 1254-69
Miyazaki T. et al. (2017), Sci. Rep. 7: 41165
Kikuchi T. et al. (2017), Nature 548 (7669): 592-6
Goparaju S.K. et al. (2017), Sci. Rep. 7: 42367

Hayashi R. *et al.* (2017), *Nat. Protoc.* **12** (4): 683-96 Ishii K. *et al.* (2018), *Stem Cell Reports* **10** (2): 568-82

**Caution:** For research use only. Not intended for human use. In the event of accidental ingestion or contact with the eyes, immediately wash the affected area and seek medical attention.

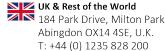
**Product information:** Current information including references and Q&A are available on the website of Matrixome, Inc. Please use the URL or QR code below.

### **Designed by:** Matrixome Inc.

3-2 Yamadaoka, Suita, Osaka 565-0871, Japan Institute for Protein Research, Osaka University

Manufactured by: Nippi, Incorporated 1-1-1 Senju Midori-cho, Adachi, Tokyo 120-8601, Japan

For research use only Not for use in diagnostic procedures



F: +44 (0) 1235 820 482

#### North America

1035 Cambridge Street, Cambridge, MA 02141. T: +1 (617) 945-5033 or T: +1 (800) 987-0985 F: +1 (617) 945-8218 Germany

AMSBIO| www.amsbio.com | info@amsbio.com

Bockenheimer Landstr. 17/19 60325 Frankfurt/Main T: +49 (0) 69 779099 F: +49 (0) 69 13376880

