

## iMatrix-511 silk

Product No. AMS.892 021 1,050 µg

Version 003  
Store at 2 15°C

**Product description** iMatrix-511 silk is a recombinant human laminin-511 E8 fragment protein produced by a silkworm expression system. iMatrix-511 silk contains the integrin-binding site of the laminin-511 molecule. iMatrix-511 silk 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 silk 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. 892 021 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 (K<sub>d</sub>) for the binding with integrin α6β1 is 10 nM or less.

**Methods of use:** By either of the following methods, iMatrix-511 silk can be coated onto a culture vessel.

**The optimum coating density may differ by cell-type, cell-line, medium selected, or purpose.** 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 µg/cm<sup>2</sup> is a standard but test between 0.1 and 1.5 µg/cm<sup>2</sup>.

- 1) Dilute iMatrix-511 silk with PBS(-). Use the diluted iMatrix-511 silk 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 silk with 2 mL of PBS(-) per well.
- 2) Place the diluted iMatrix-511 silk 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.
- 3) Aspirate coating solution. Then, immediately seed your cells. **Do not allow coated surface to dry.**

#### B. Pre mixing method

Determine the optimal coating density for cell culture. The standard density is 0.25 µg/cm<sup>2</sup> but test between 0.1 and 1.5 µg/cm<sup>2</sup>. The optimal coating density may be affected by the medium and cell density of the cell suspension.

- 1) Add iMatrix 511 silk to the cell suspension. To coat with 0.25 µg/cm<sup>2</sup> onto a 6 well plate with 9.6 cm<sup>2</sup>/well, add 4.8 µL of iMatrix 511 silk to 2 mL of the cell suspension per well.
- 2) Place the cell suspension containing iMatrix 511 silk 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  
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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  
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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:** For more information, visit [www.amsbio.com/imatrix-recombinant-laminin-511/](http://www.amsbio.com/imatrix-recombinant-laminin-511/) or contact your local office of AMSBIO (see 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

AMSBIO | [www.amsbio.com](http://www.amsbio.com) | [info@amsbio.com](mailto:info@amsbio.com)

 **UK & Rest of the World**  
184 Park Drive, Milton Park  
Abingdon OX14 4SE, U.K.  
T: +44 (0) 1235 828 200  
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**  
Bockenheimer Landstr. 17/19  
60325 Frankfurt/Main  
T: +49 (0) 69 779099  
F: +49 (0) 69 13376880

 **Switzerland**  
Via Lisano 3  
(CP.683)  
6900 Massagno  
T: +41 (0) 91 604 55 22  
F: +41 (0) 91 605 17 85