

iMatrix-511MG

Product No. 892 005 1,050 µg



Version 003
Store at 2-15°C

Product description: iMatrix-511MG is a recombinant human laminin-511 E8 fragment protein expressed in Chinese Hamster Ovary (CHO)-S cells. iMatrix-511MG contains the integrin-binding site of the laminin-511 molecule. iMatrix-511MG 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-511MG 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: Product No. 892 005 1,050 µg / 6 tubes
175 µg / 0.35 mL / tube

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 1 nM or less.

Methods of use: By either of the following methods, iMatrix-511MG 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/cm² is a standard but test between 0.1 and 1.5 µg/cm².

- 1) Dilute iMatrix-511MG with PBS(-). Use the diluted iMatrix-511MG immediately. To coat with 0.5 µg/cm² onto a 6-well plate with 9.6 cm²/well, dilute 9.6 µL of iMatrix-511MG with 2 mL of PBS(-) per well.
- 2) Place the diluted iMatrix-511MG 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 the 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 µg/cm² but test between 0.1 and 1.5 µg/cm². The optimal coating density may be affected by the medium and cell density of the cell suspension.

- 1) Add iMatrix-511MG to the cell suspension. To coat with 0.25 µg/cm² onto a 6-well plate with 9.6 cm²/well, add 4.8 µL of iMatrix-511MG to 2 mL of the cell suspension per well.
- 2) Place the cell suspension containing iMatrix-511MG 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: 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
Tel: +81-6-6877-0222 Fax: +81-6-6877-0002

Contact: <https://matrixome.co.jp/en/contact>

URL: <https://matrixome.co.jp/en/>



Manufactured by: Nippi, Incorporated

1-1-1 Senju Midori-cho, Adachi, Tokyo 120-8601, Japan